

Precision SHOOTING

September 1961

Vol. 6, No. 5

35 cents



a magazine for Shooters by Shooters

Precision Shooting is published monthly by Precision Shooting, Inc.

Editorial and business office at 64 Depot Street, Lyndonville, Vt.

Editor—P. H. Teachout
President—Crawford H. Hollidge
Vice-President—Robt. Stinehour
Treasurer—P. H. Teachout
Clerk—Frederick G. Mehlman

Subscription rates:—To the U. S., Canada and Mexico, 1 year \$4.00, 2 years \$7.00, 3 years \$9.00. All other countries \$1.00 per year additional.

Change of address requires 30 days' notice.

Place of Publication—Cowles Press, Inc., 83 Eastern Ave., St. Johnsbury, Vermont. Second-class postage paid at St. Johnsbury, Vt.

CHARLES HECKMAN

Charles Heckman, owner of C-H Die Company, and all of his family were killed in a head-on highway crash the night of August 27th, near Yuma, Arizona.

Charles Heckman was born in 1925 in El Paso, Texas. He enjoyed hunting and shooting since he was old enough to go along with his father. By the age of 16 he was making his own reloading tools. He went to Columbia University, and during World War II became Engineering Officer aboard a U. S. Destroyer.

After being discharged in 1946 he started making reloading equipment as a one-man operation on a small scale, as a spare time hobby. Demand caused him to increase production every year until C-H became one of the giants in the field, well known in many foreign countries. He married a Scotland girl, Evie, in 1953. Their children were Marie, about 7, and Andrew, about 5. He planned for Andrew to carry on the business.

Kent Bellah

THE COVER PHOTO

Competitors going forward to change targets during one of the International type course 50 meter smallbore matches on the Murrysville Rifle Club range (Pa.).

This club has been holding two or three international type free rifle tournaments each season on this range. They now have a six bay firing line with two competitors firing from each bay.

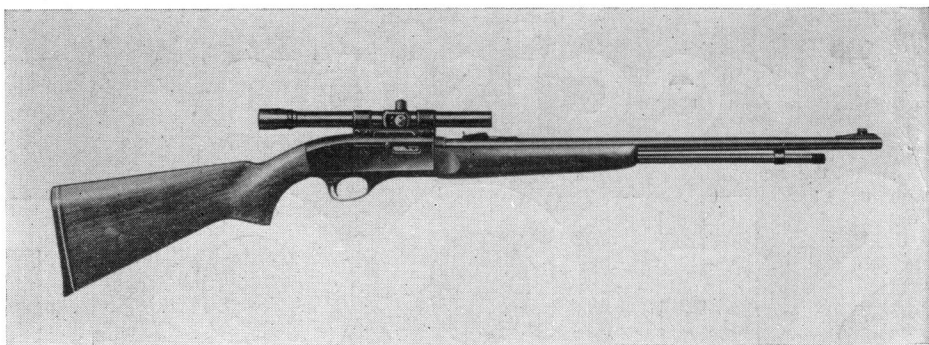
This season they have held at least one 300 meter international type match on an improvised range (as yet). (See "Tournament Circuit" this issue.)

The Club secretary is William R. Funk,

A FORWARD STEP

The organization of the National Bench Rest Shooters Association, Inc. is set up on a regional basis, with members resident in each region eligible to vote in elections of a Director to represent them in the national organization (a Director and two Deputy Directors in the big membership Eastern Region). Directors are elected for two year terms with half of the Regions electing on alternate years.

In the past, and for most part at present, meetings for members to elect their Director have been held at one of the larger matches in the Region and the Directors elected by those members present at the meeting. This is quite permissible, according to NBRSA by-laws, but it does result in the managing directors of the NBRSA being elected by a very small percentage of



KODIAK Model 260 Autoloader Rifle in .22 Magnum Rim Fire Caliber.

the members in good standing and eligible to vote.

1961 is an election year for Mid-Continent Region. The incumbent Director for the Region, R. G. Berry, felt that it should be made possible for every member in the Region to vote, if they wished to do so, so he conducted a mail ballot election in the following manner.

He appointed a nominating committee composed of all past Directors for the Region who are presently members in good standing. The committee nominated four candidates for election. A postal card ballot was made up listing the four committee nominees plus space for a write-in candidate, and instructions to vote for ONE candidate. The ballots were mailed to all members in good standing resident in the Region. The members were instructed to check the candidate they wished to elect, sign the ballot and return to Berry by a specified date.

Of the 66 ballots mailed, 57 were returned. Larry Engelbrecht of Wichita, Kansas, received the most votes (20) and was elected Director for a two year term beginning January 1, 1962. Horace Powers received 16 votes, Bud Carden 15 votes. Only a very few used the "write-in" privilege.

This is the first time to our knowledge that a NBRSA Regional Director has been elected by a mail ballot. It seems to be the only means by which every member of the NBRSA may conveniently exercise his voting right. The results of this Mid-Continent Region election would seem to indicate that NBRSA members will make use of the mail ballots if the opportunity is provided. It might also seem that greater individual member participation in the elections (and perhaps on important policy questions) might result in a stronger, healthier organization. It would at least seem worth a more extended trial.

PHT.

THE KODIAK .22 R. F. MAGNUM AUTOLOADER

I have had one of the KODIAK Model 260 autoloading .22 Rim Fire Magnum rifles for several weeks and have shot and used it enough to be convinced that it is a well designed, well made and fully reliable rifle of its type, and is as well a very nice looking, nice handling rifle.

The first autoloader for the .22 R. F. Magnum cartridge is manufactured by the Kodiak Manufacturing Company (formerly Jefferson Arms Co.), 112 Quinipiac Ave., North Haven, Connecticut. The action is the simple blow-back system but with some special features for handling the potent .22 Magnum round. The breech-block is similar in size and weight to that in the companion model designed for the .22 long rifle cartridge, but a weight under the forearm, partially surrounding the magazine tube, linked to the breech-block by two flat

bars, one on each side of the weight and breech-block, provides the inertia resistance required for the more powerful Magnum cartridge. The link-bars between breech block and weight are out of sight and fully protected within the receiver and forearm. This simple design does its job well.

For the shooting I have done with the rifle I have not had a single malfunction of any kind. That, in my opinion, speaks very well for good design, manufacture and assembly of the magazine-to-chamber feed assembly and the extraction and ejection system. I have not tried any foolish fast-as-the-trigger-can-be-pulled test for function since a rifle is not subjected to that kind of treatment in practical field use.

Accuracy-wise, I would consider the rifle good for one of its type. The rifle receiver has a rib for attaching a scope sight with the "tip-off" type of mounts, and is regularly equipped with conventional open sights on barrel. I mounted a Weaver B6 scope and did some shooting from bench at 100 yards range. Most of the shots grouped within 2 inches, but there were a few fliers that widened the aggregate grouping to approximately 4 inches. Some of those flier shots may very well have been the fault of shooter as much as of rifle or ammo. I have also shot the rifle considerably with the factory open sights, consider them as good or better than most of that type and would not feel very abused with having to use them for small game hunting at normal ranges.

While I think the potential real accuracy is better, I do think that **my own** reasonably sure hitting range on animals of woodchuck size would be approximately 100 yards, and I don't think the **average** user under field shooting conditions would do much better. However, with the flatter trajectory and greater power of the .22 rim fire Magnum cartridge, I do think this outfit may be considered a practical 100 yard field rifle for the smaller varmint animals. For "eating" game I would suspect that head shots would be a requirement for this more destructive cartridge, but the accuracy of the rifle should be adequate for such shots for the normal range at which such game is usually shot.

Summing up, I would consider this Kodiak Model 260 autoloader a practical, sound, reliable hunting rifle for small varmints and game to ranges of 100 yards. Price of the rifle (\$59.95 retail) and ammo (\$2.60 per box of 50) are reasonable for such a practical outfit. The outfit should be of special interest to those fortunate people who can get rifle shooting practice on running jack rabbits.

6.5 M/M EXPERIENCE

By Henry Campbell

In an old issue of Precision Shooting I ran across an article, "Letters Wanted." The writer's problem seemed to be match

grade bullets for a 6.5 wildcat. I had this problem too.

The first thing I want to say is that I think the big .300 Magnum case is the wrong case for the .264 bullet. The Winchester .264 was a big disappointment to me, as was the German 6.5 X 68.

With the help of Fred Huntington we made up a 6.5 X 280 - 26° shoulder case, blown out to take up to 62 grs. of 4831 behind a 125 gr. Nosler bullet—CCI primed. The barrel is a 17-22A Timken Douglas, 1 turn in 10 inches—6 groove; the same O. D. as Winchester Target weight but 26 inches long. Velocity in this tube will go 3500 f.p.s. with the 125 gr. Nosler. It will put 5 shots on a 1 inch paster at 100 yards from a cold, dry barrel. It **will not** shoot the long, heavy bullets.

A reamer was made up and a new barrel chambered with a 9 inch twist. This handles Norma 140 gr. and Hornady R. N. 140 gr. with very good results. I am at present making up one with 1 turn in 8 inches. I want to see what it will do with the top weight 6.5 bullets.

In the original gun my own 109 gr. H. P. bullets developed, on D. L. Whitehead's chronograph, 3680 f.p.s. with load of 58.5 grs. of 4350. Accuracy was excellent. The 77 gr. Norma R. N. with 58 gr. 4831 only showed 3418 f.p.s. This bullet is not heavy enough to build up enough pressure with this powder.

Please note at this point; **4831 powder should not be used in midrange loads.** Full power loads only with it.

With the 120 gr. Sierra and 125 gr. Nosler, 58 grs. 4831, this rifle will out-perform the .264 Magnum. It is fast, flat and bench rest accurate. I've taken chucks so far away, shooting from rest, I couldn't hardly believe it myself. The 125 gr. Nosler will make a prong-horn swap ends. This cartridge with a 26 inch barrel, 1 turn in 9" for general use and for chuck, 1 turn in 10", is tops.

NEW 1962 GUN DIGEST

16th Annual Edition. Edited by John T. Amber. The Gun Digest Co., 4540 West Madison St., Chicago 24, Illinois. \$3.95 postpaid.

John Amber has made the familiar big GUN DIGEST bigger and better every year. This year is no exception. It's a whale of a lot bigger and better than ever! The 385 large pages, (yes, 385) have authentic gun dope on nearly every subject. It's a one-book library! The 58 major features are the most ever. The catalog section is enlarged with prices and specs on most everything connected with guns, shooting, or handloading. The 17 departments are a permanent reference on current items, products and news. John Amber and his staff have extremely high editorial standards for text, and photos. It cost a fortune in money and months of hard work to assemble the material by experts in their field.

No doubt nearly all of our readers are familiar with past editions, will consider this new GUN DIGEST a "fust." It's too big to review in detail, and I haven't had time to read it all. Articles that appealed to me include the Testfire Reports on new guns. John Amber wrote on foreign arms and long tubes, doing an excellent job. I wrote the Handbook Testfire Section, as I've done for the past several years. Argosey's Pete Kuhlhoff, in Dead Center, tells how to sight-in a rifle. Marlin thought the idea was good enough to use for their \$1 Sighting-in Guide. New Loads Make News is a report on the Norma .308 and .358 Magnums, the very popular big-bores of modern vint-

IN CALIFORNIA . . .

Tune up your deer rifle, your bench rest rifle, your target rifle and yourself at the

HUTTON RIFLE RANCH . . .

Official Range of GUNS and AMMO magazine
20 Covered Bench Rests with Spotting Scopes
Midway between Highway 101 and 101-A, in
Topanga Canyon, near Santa Monica, Calif.

age, and the Walker and the Donaldson super-accurate 6mm's. Mike Walker, Harvey Donaldson, and Norma, have all contributed much to this shooting game, and they deserve recognition.

Gil Hebard, a shooter and dealer who knows short tubes, has an excellent piece on How To Be A Handgunner. His \$1 catalog is also a handbook on handguns, listing more guns and reloading equipment than most people ever heard of, plus articles by top handgunners and pistolsmiths. His address is Knoxville, Illinois. Gil ships guns and equipment to every state in the nation.

A timely article is Military Arms For Sporting Use. Capt. George C. Nonte, Jr., in New Cases From Old, has good dope on how to make cases for old or odd-ball calibers. This will put many ancient or obsolete guns back in service. Robert Held, in Kentucky Rifles, kicks a sacred cow, telling the truth about these famous pieces. Crawford Hollidge, better known in some circles as Ernest Stuhlschuter, in Hollow Point Homily, has fine tips on swaging superb rifle bullets. His "Spintru" are well known for superb accuracy. My own article on Swaged Handgun Bullets may have some good tips.

John Maynard's Truth About Twist may explain why your reloads are not shooting well, or even your factory cartridges. You'll like his new twist chart. Don't Blow Your Head Off! has good dope on gun and ammo safety, although it isn't a complete work on the subject, that really deserves a rather large book. Ed Yard lists chronographed loads for The Hot Little .22's, including the defunct JGR. Pete Brown, of Sports Afield, writes on Stick To Your Guns. Pete means one gun! Warren Page has some facts on bullet Knock Down, that corrects the popular myth on bullet terminal performance. P. O. Akley, noted gunsmith and wildcater, gives loading data and sage comments on some 20 good Wildcats. You'll like Col. Townsend Whelen's piece on Cold Comfort.

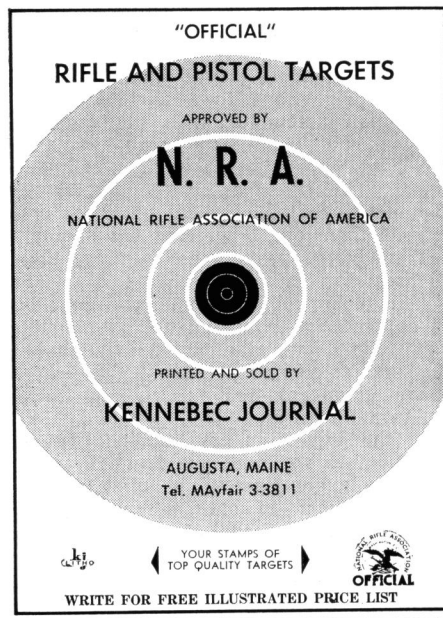
Remington-Peters premium grade S-P (Steel-Plastic) shotshells and their reloading is covered by Jim Horton. American Bulleted Cartridges is a run-down on performance of nearly all metallics. If Hollywood described the Mammoth 1962 GUN DIGEST on the silver screen they would call it Super Colossal, Stupendous and Magnificent. For once they would be right! It's the "Best Buy Of The Year," to say the least. — Kent Bellah.

ACCURACY FACTS

(U. S. Army Ordnance findings, based on extensive testing at Frankford Arsenal using Cartridge, caliber .30 Match M72 and test barrel assembly having interior dimensions in the range of those for Rifle, U. S. Caliber .30, M1, National Match.)

1) The bullet's precision, expressed as extreme spread of ten shots at: 300 yards is 3.5 inches ("V" ring is 4 inches); 600 yards is 8.1 inches ("V" ring is 12 inches).

2) Bullets having a weight differen-



OWEN LAMINATED GUNSTOCK BLANKS

505 So. Decatur St., Watkins Glen, N. Y.

TRANSFER OF OWNERSHIP

I have sold my Laminated Gun Stock Blanks business to REINHART FAJEN, Warsaw, Mo. and the change of ownership is effective immediately. Mr. Fajen will continue to carry the same line that I did. I wish at this time to thank all of my former customers and express my appreciation for the business they have given me.

Ralph I. Owen

tial of one grain in a sample of ten or more have no measurable effect on accuracy.

3) When testing to determine the relative quality of two bullet types at 300 yards, where the average extreme spread of three 10-shot groups of one sample is fifty percent greater than the other, chances are the difference is real.

4) With IMR 4895 propellant, a change of 1.0 grain in charge will change the vertical position of the center of impact of a 10-shot group about 1.2 inches at 300 yards.

5) When firing slow fire, with cartridge containing less than a full case of propellant, careful chambering of the cartridge will improve velocity uniformity and thereby improve group size.

6) Primers affect accuracy—efficient primers initiate the internal ballistic cycle uniformly so that the bullet is launched at a uniform muzzle velocity. As muzzle velocity varies, the vertical dispersion of a group varies.

7) Better than ninety percent of the barrels used in testing improve (i. e. reduce group size) at the rate of about 0.3 inch extreme spread per 1000 rounds and last for more than 4000 rounds.

PRIMERS

Fred Hallberg

Accurate and precise information concerning the primer is not readily available to the serious shooter. This lack may be explained in many ways and I would list some of the reasons as follows:

1) The handloader must purchase the complete finished article and there are relatively few choices available to him. He cannot assemble it and, in such assembly, learn something about it.

2) There is an unredstandable reluctance on the part of manufacturers to experiment and upset production habits when sales are running smoothly.

3) It is difficult for the amateur ballistician to evaluate a primer so that he can apply the right one to a particular job. Ammunition assembled with the greatest skill will not necessarily bring out and make apparent important ignition characteristics. Without extensive laboratory equipment, it is too easy for other factors to cancel them out. Therefore, the shooter tends to accept primers as they are and take them for granted.

But such problems should be considered as obstacles only and not as impenetrable walls. If we want to, we can make them serve as a challenge. We know primers are important—very much so. Let's delve into that area.

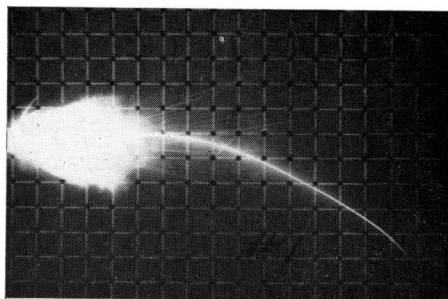
In the July issue of Precision Shooting, I tried to approach the problem from a different angle. Instead of offering experimental proof to back up my statements, I tried to reason them out logically along the following lines. Why do people consider it necessary to manufacture different types and strengths of primers? Why are some made more powerful and some less powerful? If some manufacturers design their primers for use with a particular powder, should we not apply them to that powder? But, as I reread that article I'm not certain I succeeded in my purpose.

Now here, in this issue of P.S., comes a man who can illustrate as well as evaluate the primer in action. He is Mr. Mel Burris of Selby, California. In my opinion, he is engaged in the most important work that has come out of amateur ballistics in recent years. If he goes through with present plans, all serious shooters will owe him a debt of gratitude. He is now photographing the flash produced by primers. If his selection of primers for test is broad enough and if he proceeds in the manner of quality control inspectors in large manufacturing plants, we shall have no fear as to the validity of the conclusions arrived at. He is looking for two effects, uniformity and magnitude. Both are important. Uniformity should be present in all types—strong and weak, large and small.

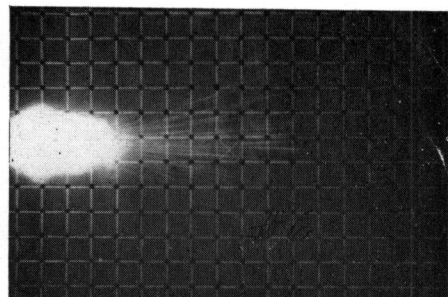
I don't know how he intends to finance his effort but one way to do the job properly would be to procure 1000 of each type of each brand. From each 1000, he should select and photograph one primer from each of the ten trays in the carton. Such dispersion should procure valid results. Each picture should be taken in precisely the same manner and each picture should be properly marked for identification.

Let us look at what he has already done. (At a later date I should like to add something to the points raised in his letter).

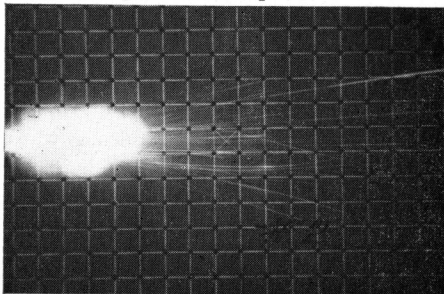
For example, there are two photos of CCI #250 primers. One shows a flash twice the size of the other. Did they come from the same box? Are standard primers mixed with magnum primers? These pic-



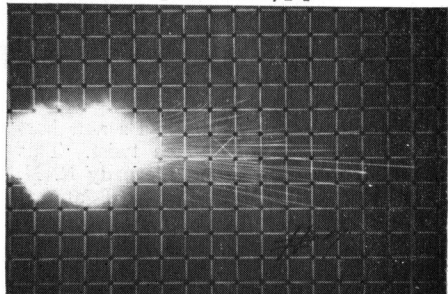
Speer No. 200 primer



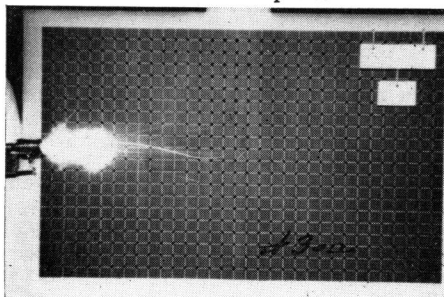
Remington No. 9½ primer



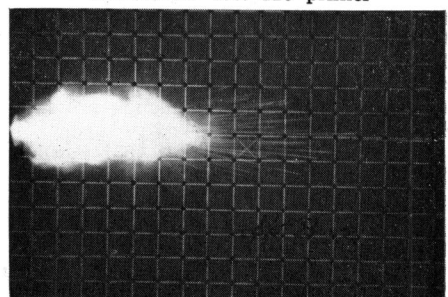
CCI No. 200 primer



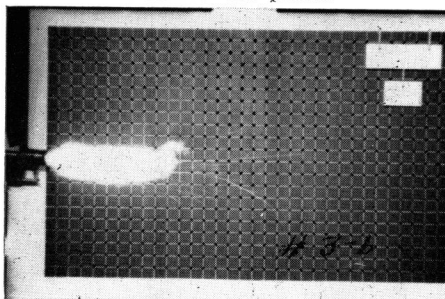
Winchester No. 120 primer



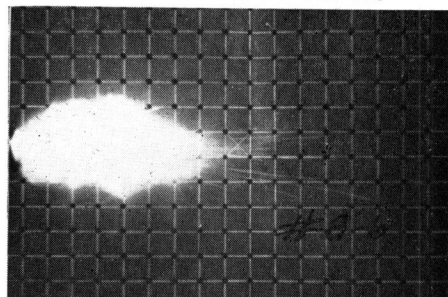
CCI No. 250 primer



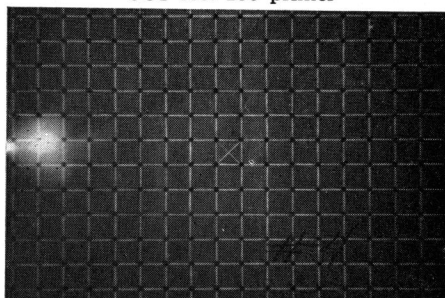
Winchester-Western No. 120



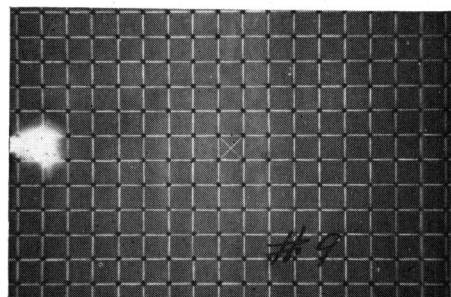
CCI No. 250 primer



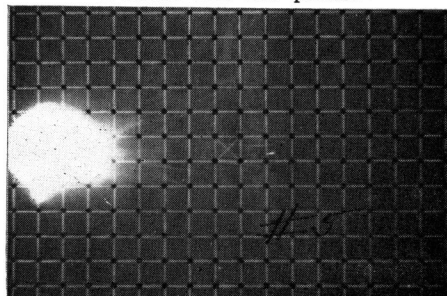
Winchester-Western No. 120



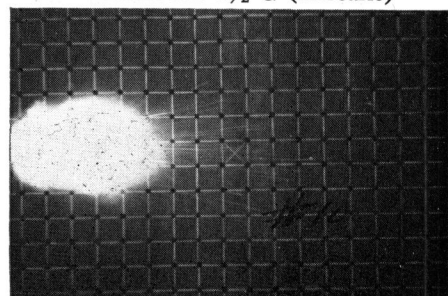
Federal No. 210 primer



Western No. 8½ G (mercuric)



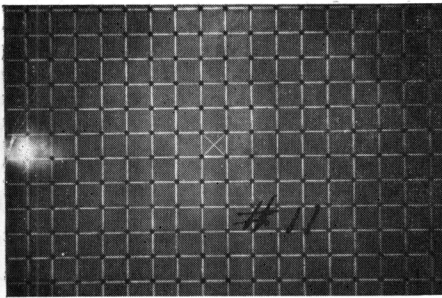
Federal No. 215 primer



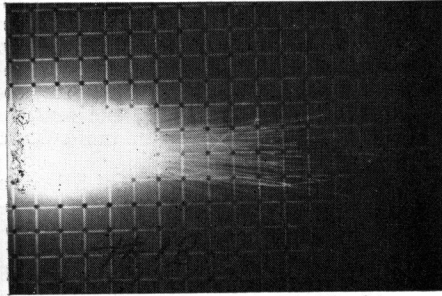
Western No. 8½ primer

tures could indicate a lack of uniformity but, before deciding that such is the case, it would be well to proceed as outlined

above. The camera on the CCI #200 is differently placed and may have affected the appearance of the flash. Nevertheless,



Frankfort Arsenal No. 26 (corrosive)



Winchester No. 120 M (Gov't)

the results could indicate a warning signal.

We know that Frankfort Arsenal chlorate primers and that mercuric primers are accurate and uniform igniters. Observe how small the flash is and note the absence of violence. Note how similar the flash of the Federal 210 non-corrosive primer is to that of the chlorate and mercuric primer. The Federal 215 appears to be much hotter than the #210 and that is as it should be. The Remington primer seems to be similar in nature to the Winchester 120 but with a smaller flash. Winchester 120c are hot and quite uniform. Western 8½s duplicate the Winchester 120s. Speer 200 appears to have improperly ground abrasive in its mixture. Otherwise, it is similar to Winchester-Western.

These comments are snap judgements based upon what I can see plus a bit of past experience. Let us hope that Mr. Burris will take ten photos of each type and brand and that he will let us in on the results obtained.

(Editor's note: Mr. Burris' letter follows and the primer flash photos are grouped and labeled for identification and illustration).

Dear Mr. Teachout:

Just received the June issue of P.S. in which is printed the item "Thought On Primers" by Mr. Hallberg. It just so happens that I've been photographing primer flashes for several months, now, myself. I find it quite "illuminating". It's odd that this subject should come up at this particular time because Mr. Ed McNally (past president of NBRSA) and I talked the primer problem over up in Oroville, California, at the R. C. B. S. Open House, held on May 20, 1961. At the time, I showed some of the photos I'd taken and Mr. McNally was enthusiastic to the extent of requesting a set of the prints and encouraging me to delve further into it. Mr. McNally mentioned that of all the component parts that make up the rifle and its cartridge, the bench rest boys feel the primer and scope mount have received the least study. I hadn't realized that such was the case, but I have been interested in ignition and had lined up a rather vigorous program of study of ignition some five or six months ago and the photographing of primer flashes is a part of it. Don't know right off just how many photos we've taken but it's probably between two and three hundred. We didn't print but a

few. Here are the ones we've photographed to date—all large rifle:

1. Speer 200 (predecessor to CCI)
2. CCI 200
3. CCI 250 Magnum
4. Federal 210
5. Federal 215 Magnum
6. Remington 9½
7. Winchester 120
8. Winchester-Western 120
9. Western 8½ G (mercuric)
10. Western 8½
11. Gov't 26 (FA-70 comp.)
12. Gov't 120M

I'm sending along samples of each. These prints were made from what I considered as representative of each type of primer. None of the primers gave an absolutely uniform flash, but of the bunch the Remington 9½ was definitely more uniform than the others. Notice the difference between the small, soft flash of the mercuric primer as compared to the big, powerful blast of the newer styphnate compounds. Then notice the Federal 210 flash. It certainly bears resemblance to the mercuric type. And what the Devil are those "Comets"? It's my guess that they are burning bits of the material put in primer compositions to sensitize them.

As you will probably guess after seeing the pictures, the grid we use is nothing more than a piece of 24" x 36" pegboard. It is sprayed with a dark grey auto primer and narrow white stripes are drawn thru the holes to form the grid. The pictures are of two main types; One showing the grid lighted up, with the primer flash superimposed on the grid. This is a two-stage shot using an electronic flash. (illustrations are of this type—Ed.) The other type is of the primer flash only, shot in the dark—lens open—no grid. This particular shot gave me a definite feeling of depth of the flash. We found that the negative, used as a slide in a projector, shows the flash best of all, seeming to give a half-transparent, subdued 3-D effect.

Our original set-up was very simple, employing only the grid, the camera, the electronic flash and tripod. Several gadgets have been added now and the pictures can be taken with more speed and facility. A special table has been set up for holding the stuff, in a more or less permanent fashion. Just to satisfy our curiosity, we're going to run quantitative/ qualitative tests on all sizes and makes of primers on the market at the present time, along with any of the older ones we can dig up, for comparison.

Of course, no matter how many are taken, the photo should be considered only half the experiment. It just naturally follows that the other half would have to be an empirical firing of various combinations of loads to correlate the findings of the camera. Otherwise I'm sure that old equalizer, the law of averages, would get us in trouble at the bunkhouse!

Too, the photos would be of no great value unless we could assign to them units of force, heat and brisance. For instance, what is a "hot" primer? Are we speaking of heat? Force of the spit? The brisance? If we were to draw any conclusions from these photographs we'd have to say that the Remington 9½ and the 120 Winchester certainly look "hotter" than the Federal and C.C.I. Magnum primers. By the same token the size of the flash and intensity of "white" give them the appearance of more force. And this question of brisance, or shattering effect; I prefer to divorce it from the effect of the "force" of the spit. I think of the "force" as the amount it blows the powder grains around inside the case, much as a heavy wind

would blow pieces of debris around in a windstorm. On the other hand, the brisance is the degree of shattering effect the explosion has on whatever it comes in contact with, such as the powder charge. Incidentally, this could be a contributing cause to the "detonation" of a magnum charge using the slower powders. Maybe the large kernels of, say, 4350 and 4831 are susceptible to shattering under certain conditions. It seems that these "detonations" usually occur in a reduced charge of slow burning powder, so, maybe the force and brisance of the spit bash the kernels of powder against the shoulder and sides of the case, against the base of the bullet and against each other, causing them to shatter to dust, thereby presenting to the heat of the flash a much greater percentage of the total weight of the charge, instantaneously. In other words, maybe the "hot" primer is in fact too brisant. I've heard of, and seen in print, cases of handloads using magnum cases, magnum primers, and either 4350 or 4831 powder, detonating. Mr. Ackley states that detonation can be accomplished at will. I'm inclined to believe it can be, too. However, if the powder used is 4831, then it becomes even more believable, for the reason that before it has reached the handloader, it has reached the end of its usefulness to the Military and just maybe some of it has begun to decompose—to the extent of not being able to withstand the explosion of the primer. I dunno, but it sounds good. Anyway, to get back to the photos and companion tests to determine force, etc., I should add that we're attempting to do the whole series together, and may have more to say about it later.

Mel Burris
P. O. Box 771
Selby, California

.22 JET - TESTFIRE

By Edward M. Yard

(A contribution of the
EXPERIMENTAL BALLISTICS
ASSOCIATES)

The REMINGTON .22 JET cartridge and the new Smith & Wesson .22 CF Magnum revolver Model 53 to fire it have been announced, and the initial surveys are in. The usual first blush of promise, based on advertised ballistics and subsidized field trials, has been reported in glowing terms, as it could have been expected to be. The active field pistol shooters have been longing for just what this one purports to be. With varmint as nearly year round targets, they have wished for a handgun that would reach out flat to the full limit of advantage of the new scopes and mounts for the one hand guns.

The .22 Kay Chuk, the .22 Hornet and others have been chambered in thousands of revolvers. Many owners have been pleased with the performance they got. Others have hoped for even more. Being one of the latter, I have done quite a bit to develop some REAL .22 HV cartridges for short arms. As you shall see, some of these perform as we might wish.

The .22 Jet was announced in April, 1961, at the NRA Annual Meeting in St. Louis, Mo. The ballistics indicated for this new cartridge would suit every avid pest exterminator, S & W gives M. V. as 2460 F.p.s. with 40 grain bullet from an 8¾" barrel.

These were our hopes, our expectations what the pistolers wished for had been promised, indeed offered. In the stir of satisfaction about this heartening news, we still felt a few doubts about this one. Could

(Continued on Page Six)

CHRONOGRAPH TESTS

ref	Powder	Bullet	Velocity	
	Wt. Gr. Type	Wt. Gr.	F. P. S.	
22 Rem. Jet CF Magnum				
197	Rem. Lot W-29E	40	1810	S&W Mdl. 53, 6" Bbl.
198	Rem. Lot W29E	40	1815	Two 10 shot strings
224 Harvey Kay-Chuk Std.				
161	8.5 H240	35	1815	S&W K-22 Harvey Conversion—6" Bbl.
163	7.0 AL-7	37	1725	
165	7.0 AL-7	40	1825	Hotter primer.
22 Hornet				
119				
120	Rem. Lot B30E	45	1950	7" Bbl.—Yard Conv.
219 Thor				
121	16.4 4227	35	2485	7" Bbl.—Yard Conv.
126	13.0 AL-8	35	2400	
122	16.0 4227	37	2375	
111	14.0 2400	40	2350	
22 WMR				
	7.5 H240	37	1835	Substitute Loads
				S&W K 22—8 $\frac{3}{8}$ " Bbl.
	7.0 H240	41	1680	

These results, all run through the same chronograph, give the .219 Thor a big edge in practical, out of the revolver, field velocity. Note, too, the Factory Hornet result and those substitute loads in the .22 WMR. These comparative results tell the story.

We can't recommend any of these loads, you will simply have to do it yourself, but that is how they worked for us.

it really deliver these bait ballistics? We, as many others, longed to know.

Just how well this one did fulfill its promise we found out July 15th. As a part of our First Annual Chronograph Clinic, we had a Smith & Wesson .22 CF Magnum revolver with 6" barrel and Remington .22 Jet ammunition on hand. Well aware of the previous reports on this one, especially as to the possibility of extraction trouble, we tried the gun first without any preparation.

A tag in the box warns that the chambers of the cylinder must be cleaned of lubricant to avoid extraction difficulty. We assumed that an average shooter would overlook this precaution in his haste to try a new hot-shot. The gun was, accordingly loaded with five cartridges just as it came from the box. These rounds were fired through the chronograph, and at the same time checked for function. Not the slightest trouble was encountered. The cylinder revolved smoothly between shots, and extraction was easy: in most cases the cylinder full of hulls fell out on tapping the butt, no extractor rod push being needed.

BUT HOW WELL this one fulfills its ballistic promise we discovered in soggy sorrow that July 15th afternoon. The .22 Jet, fired from a 6" revolver barrel, is way below the advertised muzzle velocity. Far enough off expectation to dampen whetted hopes. Two strings of TEN shots were velocity checked using accurate counter chronograph equipment, averaging 1813 F. P. S. (first ten 1810 F. p. s., second ten 1815 F.p.s.) Indeed below par for most of the wildcat circuit, as we shall cite instance.

THIS IS JUST KAY-CHUK STUFF, and we know, we have chronographed it (both of them, that is). Other .22 revolver wildcats or non-standards are even more capable. The .22 Hornet factory load in a revolver with 7" barrel does 1950 F. p. s. with a 45 grain bullet! Even the .22 Rim Fire Magnum, with substitute loads in a revolver will about equal this performance (see 1962 Gun Digest). It just isn't what we anticipated, or had hoped for.

While the gun itself was all that could be expected, an excellent handgun, its design and finish were superb, as usual with Smith & Wesson arms, the ballistics of its cartridge were far below what we had been led to expect. This came as no great surprise. The American Rifleman had reported a figure of 1832 F. p. s. instrumental velocity for H. P. White Laboratory

tests in July. Other private sources had advised me that they had obtained similar figures. It is to be hoped that, as earlier extraction difficulties have been overcome, the exterior ballistics will be brought up to expectation as well.

It should be pointed out that several wildcat cartridges that have been fitted to revolver have done better. One of these, the .219 Thor will be reported briefly here. This one, too, is based on the .357 Magnum case necked down to .22 caliber (as is the .22 Jet), but with a long body and sharp shoulder. Some loads for it are given which show the results which the .22 Jet promised. All of these loads were chronographed as fired from a revolver with a 7" barrel. In other words, the results for the .219 Thor are actuals that can be obtained from a field gun, as high as 2485 F. p. s. with the 35 grain Sisk bullet, and 2350 with the 40 grain ball. Such practical ballistics are what we hope to see in commercial arms for those unskilled in wildcat pistoloeering. Even the .22 Hornet factory load is a hot 1950 F.p.s. with 45 grain bullet, actual revolver velocity.

NEW .22 MAGNUM LOADS

By Kent Bellah

My loading dope for the new S & W .22 Magnum revolver, in our June issue, was the first data in print. The production gun and cartridge represent a major breakthrough in small bore handgun ballistics. They deserve headlines a foot high. Even Remington was thinking in rifle terms when they brought out the Jet cartridge. The bullets in their first loads were a bit too hard for maximum efficiency, although my field tests on small varmints indicate they are more potent than Remington .357 Magnum ammo in a 3 $\frac{1}{2}$ " Magnum.

My first article was written after I had fired a few hundred reloads of various types. All of my listed loads had been safely fired. Additional testing proves that CCI Magnum No. 550 (Small Pistol) primers are superior with 2400 powder, not only in the Jet, but in .357 loads also. The CCI Magnum No. 350 is superior for the same powder in .44 Special and Magnum loads. CCI's Magnum primers maintain heat for a longer period of time, resulting in cleaner burning of more powder and a smaller velocity spread.

Remington uses their Small Rifle primer in the Jet and .357 Magnum loads. They are harder and less sensitive than CCI standard or Magnum pistol primers. They

fire perfectly in new revolvers, or those that will pass factory inspection. Misfires result in overturned guns, or those with lightened or old mainsprings. A marginal firing pin blow may give erratic ignition. New primed Remington Jet and .357 cases are satisfactory for 2400 loads, but I do not recommend any Small Rifle primers for reloads. If they must be used, seat with more than usual pressure. I believe CCI Magnum pistol primers are more satisfactory with 2400, AL-8, 540-MS, etc.

Standard CCI pistol primers are more satisfactory for fast powders such as Bulls-eye, 5066 and Unique. They give fast, perfect ignition, which has been a problem with small charges and low loading density. CCI No. 300 are the only ones I recommend in .45 ACP reloads. They are superb for light target charges, and sensitive enough for perfect ignition in tuned target revolvers.

Speer's 40 grain .223" OS-SP rifle bullet groups better than current Jet factory loads. Raymond Speer chronographed it in one of my S & W .22 Magnums. With CCI Magnum No. 550 primers, 10.5 grains 2400 gives 1796 feet per second, or 9.5 grains 1597. With 9.7 grains AL-8 you get 1818 fps. With 8 grains 540-MS you get 1782 fps.

The same bullet with CCI No. 500 Standard Small Pistol primers and 7 grains Unique gave 1726 fps, and 6 grains 1487. These are fine squirrel loads, the latter being my choice. A nice plinking charge is 3.3 grains Bullseye, and you can work up or down a few tenths for finest accuracy in your gun, or for your particular needs. Velocity is 1232 fps. You gain 100 fps with .5 grains more powder. Let's don't get powder-happy with Bullseye and Unique. Pressure increases faster than velocity, and top charges are critical. I believe listed loads with other powders can be increased a bit, and will report on this later.

Current Remington loads chronograph at 1869 fps from one of my 6 $\frac{1}{2}$ " guns. The factory listed 2460 fps was from a standard unvented test barrel, and no doubt the original load was reduced. Despite the actual velocity the cartridge is a good one, and potent. Al Georg killed a bear with one, probably the first animal of this size. Al used a K-1 Weaver scope to take the bear at 100 yards. Death was caused by the tiny pill penetrating a vital organ. Despite the fact the gun can "kill a bear," it isn't suitable for this size game, lacking adequate bullet weight, caliber and/or velocity. Al placed his shot with precision, but it isn't a bear and deer gun.

Good reloads make the gun about twice as effective on varmints, or more versatile for other shooting. All listed loads work well with Speer's new H. P. revolver bullet. Designed especially for the Jet, it's a "first" for the gun. I'm sure it will be equally good for the many .22 revolver conversions and companion caliber rifles. Ray Speer agreed fully with my suggestions for the new bullet design, diameter and material. It isn't a slam-bang job to get the first Jet pills on the market, but represents a great deal of research, testing and development to produce a superb varmint bullet.

Speer keeps their excellent line of bullets modern by bringing out tested new types. Their big bore semi-jacketed pills, a modification of Harvey Jugulars, have been replaced with a new "long jacket" type. The jackets cover the entire bearing surface to eliminate leading, and are crimped to the core. The entire lead alloy nose is exposed. These are well made and give excellent accuracy in either solid or hollow point types, at any velocity in the pressure

limits of your gun. I prefer the hollow points for any use, especially varmints.

The first samples of the Speer Jet bullets proved excellent in every way. They may not be available to dealers by the time you read this, but they will be very soon. Complete details can not be released until production is adequate to take care of demand. Remember Speer has several hundred jobbers and thousands of dealers. It requires a good many bullets for national distribution.

TOURNAMENT CIRCUIT

CAMP PERRY, OHIO

Airman 3/c Victor L. Auer won the 1961 National Smallbore Championship with a score of 4784-359x for the new 4800 point course of fire. Joe E. Steffey, Paris, Ill. was second with 4783-346x and Ransford Triggs, Madison, N. J. was third with 4782-343x.

Army 1st Lt. Tommy G. Pool won the Smallbore Position Championship with 1567-79x. Cpl. Gary L. Anderson, USA, was second with 1566-99x and Capt. Daniel B. Puckel, USA, was third with 1565-88x.

Teams from Great Britain and Canada traveled to Camp Perry to fire the Pershing Trophy Match for the fifth time since 1931. The United States team made its third consecutive win with a score of 3970. The British team scored 3961 and the Canadians 3935. Janet S. Friddell, Toledo, Ohio, was the first woman ever to fire in a Pershing Trophy Match and she led the U. S. team with a high overall individual score of 400-27x. Donald L. Bester for the British Team was second high individual with a 400-25x score.

Firing members of the U. S. Team and their scores were: Victor L. Auer 397-26, Edward E. Caygle 396-25, Janet S. Friddell 400-27, William J. Grater 398-24, Donald E. Lockstrom 397-28, Oliver H. Lauderman 395-15, James T. Morris 398-26, George A. Snellgrove 391-18, Joe E. Steffey 396-27 and Lawrence A. Wilkins 398-21.

LONG RANGE MATCHES

Earl H. Burton, Vacaville, California, was the Wimbledon "any rifle" winner, shooting a .300 H & H standard. (We do not yet know the score he fired to win this 1000 yard match).

Capt. Verle F. Wright, USA, won the Leech Cup Match (1000 yards) with a 100-18V score, which Creedmored another 100-18V score. Wright shot a .300 Ackley cartridge with 200 grain Sierra Match King bullets.

REDFIELD SMALLBORE TOURNAMENT

Sixty shooters from ten states competed in the 17th annual Redfield Rifle Tournament on the Colorado Rifle Club range, Denver, July 29th and 30th. Herb Hollister, Boulder, Colo., out-xed William Grater, Oxnard, Calif., to win the grand aggregate, 3195-247x to 3195-237x. Hollister won both sub-aggregates, out-Xing Grater in each case.

Rounding out the Ten-High in the grand were: Lt. John Bertva, USAF, 3193-235; Ray Steele, Denver, 3193-235, George Stidworthy, Jr., Prescott, Ariz. 3192-225; Clyde Reedy, Boulder, 3190-239; James Bell, Santa Monica, Calif. 3188-210; S/Sgt. A. H. Hannon, USAF, 3187-219; James Williams, Denver, 3185-219; and 1st Lt. J. B. Cook, USAF, 3183-211.

Hollister won the first metallic sight match, 50 yds., with 400-33, Walter Brooks, Terre Haute, Ind., 2nd and high Expert with 400-32 and Grater 3rd with 400-31.

Grater won the 50 meter event with a



Smith & Wesson Model 53 revolver, in .22 Center-Fire Magnum, 6" barrel. The .22 Jet loads chronographed were fired from this gun with Remington .22 Jet cartridges, lot W29E. Gun photographed in box with six adapters for Rim Fire .22's. Note the cut-out for optional extra cylinder for rim-fires.

399-29, Lt. Bertva 2nd with 399-28 and Hollister 6th with 398-30.

Hollister evened up the point score in the 100 yard event with his winning 399-26, J. Williams 2nd with 399-24 and Grater 3rd with 398-24.

Lt. Bertva won the Dewar match with 400-32 over Stidworthy's 400-30, Hannon's 400-28 and Reedy's 400-27. Grater was 6th with 399-30 and Hollister 10th with 399-26.

For the metallic sight aggregate, Hollister had 1595-115, Grater 1596-112 and Bertva 1596-111.

With any sights, Clyde Reedy won the 50 yd. event with 400-38 over Hollister's 400-37 and Walter Books topped Expert class with another 400-37. Grater was 8th with 400-33.

Hollister made another win at 50 meters with his 400-37. Ray Steele and Reedy each had 400-34 scores and Grater dropped behind a point with his 8th place 399-29.

Grater won the 100 yard match with a 400-32 but only beat Hollister by one X. Stidworthy won the final match, the Dewar, with a 400-33 to beat Grater's 400-31, which tied Hollister's point score total but lacked the X's, Hollister, with a 6th place 399-27, was still good enough to win the any sight aggregate on X's—1599-132 to 1599-129 for Reedy and 1599-125 for Grater.

In Expert class William Pruden, Aurora, Colo. beat Walter Brooks in the grand aggregate 3182-196 to 3178-208. Brooks was high in the any sight aggregate, his 1592-110 beating Pruden by a point and an X, but he couldn't overcome Pruden's 5 point lead with metallic sights.

MURRYSVILLE, PENNSYLVANIA

T. Y. "Denny" Wu from Ann Arbor, Mich., won the 300 meter side of the Franklin Twp. Free Rifle Championship, sponsored by the Murrysville Rifle Club, and R. K. "Bob" Moore of Claysville, Pa., took the smallbore end.

Since the 50 and 300 meter ranges are about 2 miles apart, and considering noise, neighbors, etc., the 300 meter match was fired on Saturday. The match was half course and the field of eight shooters made for a pleasant day's shooting without straining the capacity of the improvised range.

T. Y. Wu came in easily ahead of the field with 543-9x. Denny used a 6.5 x 55 Schultz & Larsen M54. There were number of 6.5's used with hand loads, most using

the 139 gr. Norma full jacket match bullet and powder loads such as 35 grs. 4895, 37 grs. 4064 and others in this velocity range. One Schultz & Larsen rebarreled to 244 Remington was used and showed a lot of promise.

Bob Moore lead the smallbore contingent on Sunday with 1111-12, including a 395-7 prone. Bill Roos of Sharon, Pa., returning to competition after an extended absence, was second with 1100-20. Winner Bob Moore used an Anschütz M54 and Remington Match ammo for his winning score.

LETTERS

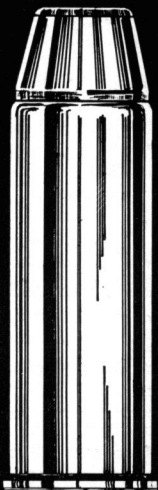
FURTHER "OPINIONS" OF WEATHERBY RIFLES

Dear Phil:

I, too, had some strong feelings when I read Bob Stinehour's remarks about the Weatherby Mark V rifle. I was elated to see that someone was willing (even in the face of certain criticism) to brand a product, using the same standards that other builders use in judging their own as well as their competitor's work. In looking at the Weatherby rifle we must take into account the claims made by the builder. Bob's original statement dealt with various receivers and magazine-trigger guard groups in their ability to adapt themselves to a good bedding job for ACCURACY—Bench Rest kind both for the unlimited weight and the two Varmint jobs. Now, all good stockmakers know that a flat area on the bottom of the receiver is a definite help in making a stock that will not only shoot good after sighting in, but all during the year. Weatherby's reason for using such a small flat on the bottom of the Mark V is obvious but I will go into it later on. Bob's statement about SPLIT STOCKS was correct, right to the letter.

I was glad to know that Les Bowman is reading our little publication. I hope he will see fit to give us an article now and then. His experience in the game field and ability to relate them to the printed page is well thought of and closely followed. There's a possibility, however, that he is not aware of the reason that such stocks have not been seen on any of his own or his customers' rifles. These stocks which
(Continued on Page Eight)

IMPORTANT First From norma



NEW
.44
MAGNUM
CARTRIDGE
WITH A
SOFT POINT
BULLET

Norma's made a dream come true for all handgun hunters and real gunbugs. Here's a .44 Magnum cartridge with super accuracy . . . tremendous shocking power.

Norma's exclusive .44 soft point bullet makes the big difference . . . doesn't deform as do ordinary lead bullets . . . packs enough wallop to literally flatten a moose!

This new non-fouling, jacketed bullet is pleasant to shoot, too. Muzzle velocity is 1470 fps in a 6½ inch barrel, even more in carbines. Breech pressure is moderate.

And famous Norma "Re" quality cases insure safe functioning, easy extraction, minimum gun wear.

Don't miss this chance to fire the first .44 Magnum soft point ever offered for handguns or carbines. Ask for the brand new .44 Magnum Norma soft point cartridge at your favorite gun dealer.

Want more
handloading info?
Send 10¢ for the NEW
"Gunbug's Guide."

Box PS-9

norma-
precision

SOUTH LANSING, NEW YORK
Div. of General Sporting Goods Corp.

Letters

(Continued from Page Seven)

were for sale never left the Weatherby plant on a completed rifle. As for Bob's remark in regard to safety, I did not read it to mean any part of the barreled action, but rather to pieces of flying wood and splinters. I saw one of these specimens which may well have been injurious to the naked eye.

I was not very much impressed by the great test of strength which was observed by firing of a 30-30 Winchester cartridge in a 270 Weatherby Magnum chamber on the Mark V action. This was reported by Mr. Al Shemaria and even if he didn't do the actual firing he evidently considered this to be a severe test. Regardless of past experience, I hope that he will go slowly in any future ballistic experiments as he does not seem to know what causes high pressures. When I read this it was immediately apparent that the one and only thing that showed strength was the cartridge case itself and not the action. When it was stated that the case held and no gas escaped I knew that pressures could not have been very high. There is a difference of .090" between the 30-30 Win. and the 270 Weatherby cases, taken from the rear of the body. The Weatherby case is enlarged an additional .020" at the rear to accommodate the belt which is on the Magnum case. With the case stretched this far even normal 30-30 pressures would have fractured it. As for the difficulty in forcing a .308 bullet through a .277 bore; well, it is not as great a feat as it might seem. To prove this statement I took my old 270 Winchester built in the ancient 1903 Springfield action and after turning down the rim of a 30-30 case till it fitted the bolt head, I loaded it up with 36 grs. of 4895, laid the rifle across the tailgate of my pick-up and touched it off. No, this was not a hot load, it was not intended to be. There was no damage to the rifle in this case either, even though there was more pressure due to the smaller chamber of the 270 Win. The case itself had a greater job to do when the larger Weatherby chamber was used, even though pressures were lower.

Now, I don't want anyone to think there is a joker out here in Templeton, California, who says that it is OK to fire a 30-30 in a 270 chamber. I also will be misquoted if anyone thinks I am comparing a 1903 Springfield with a Weatherby Mark V so far as strength is concerned. Also, I do not wish to call this a test of any kind, which I do not think it was. I did it just to prove to the uninformed that everything is not always what it seems to be.

Lastly, I would like to make a few comments about the reasons that I feel Weatherby rifles have received adverse comment from some quarters. It all began in the mid-1940's, or thereabouts. At that time men the likes of Pfeifer, Akley, Mashburn, MacFarland, Miller, Barnes, to name just a few, had designed their own versions of the 300 Improved Magnum. These and many more are every bit as good as the Weatherby. When owners of any of these rifles see in print that unless you are shooting a Weatherby Magnum you are missing out on something, it just doesn't set very well.

Another factor is price. In all fairness, the Weatherby line is tops in finish to both wood and metal. But this is where the fairness ends, at least in my opinion. The basic Weatherby without sights is not worth \$265.00. Now here, Phil, is something which is an insult to my intelligence. On page 14 of the Weatherby catalog for 1961-62 they state all their barrels are made by the cold

forming process. On page 134 of this same catalog they quote a price of \$55 to \$60 to furnish, grind, fit, chamber, polish and blue, using various actions furnished by the customer; this being the cost of their barrel, depending on which action is used. On page 132 they ask \$155.00 for a barreled action using the Mark V. These figures show that Weatherby is charging a minimum of \$100.00 for this action. If you should want any extra work done to the action, it costs extra. This extra work being to smooth up the action, such other work as damascene the follower, checker the bolt handle, etc. Now we should remember that during the time that Weatherby was using the FN action, the cost was the same for the basic rifle, \$265.00. They also charged the same for a rebarreling job, using their own barrel which was made at South Gate. This barrel had broached rifling. The difference here is that the FN cost \$59.30 retail, wholesale price being under that and then an additional quantity discount.

I would be the last to question the cost of custom work and I know that is the feeling of most all the rest of us who are in any way connected with it. But the figures which I have listed are for the basic factory rifle with a machine made stock. After the prices are broken down we see that the factory stock is bringing about \$110.00. Believe me I have seen some Weatherby stocks that at \$110.00 were a very poor investment.

For those who claim that the Weatherby action is so good that it warrants these prices, I would ask them this simple question. In what way or what are their reasons for feeling that the Mark V costs more to produce than the FN? The strength factor does not enter the picture at all. When an outfit plans to produce an item, regardless of what it is, the first thought after the design itself is this. Can it be made from a different material and still be just as strong? One of the main factors in cost of rifle receivers is the ability of the material to be machined, its wear on the tooling and, last but for from least, the speed at which it can be turned out. If you will compare the FN and the Mark V receivers I am sure you will agree that the Mauser is by far the most time consuming to make. The same for the trigger guard. I would call the bolts about a toss-up with the FN bolt sleeve being by far the most time consuming to make. In the light of this I am quite sure that the Mark V action is not costing Weatherby more than \$40.00 each delivered in California.

I know that the Mark V is a strong action and that it was reported by Weatherby to have been given some very stiff tests; however, this does not make it the strongest action in the world. I remember when the Remington 721 came out, the NRA gave it some tests that in my opinion gave it the top spot as far as strength is concerned. If Weatherby's want to make such claims let them offer their product for a comparison test with a few of the top men of the industry on hand to represent the rest of us that do not believe every thing we read.

Weatherby also claims that the reason that these barrels and actions are made in West Germany is because of the expanded world market and the need to be able to produce on both continents. Poppycock! Weatherby's reason is the same as the reason that any other manufacturer has for using the tooling and manpower of Europe and Japan.

I know that the owners of these rifles have different feelings about these things and if they still think they have gotten their money's worth, then I am glad for them.

However, for the man who is still undecided I would suggest that he look through a copy of the Gun Digest, one of the last two issued if possible, and see what some real CUSTOM built rifles look like. Take a magnifying glass and look at the engraving of men like Dale Goens, Arnold Griebel, E. C. Prudhomme, just to mention a few. Yes, we have men here in the U. S. A. who can build custom rifles and a letter to them will give a pleasant surprise as to the cost of this type of work.

Best wishes,
Doyel Tjaldeen
Templeton, California

BACKS BOB STINEHOUR

Sir; After noting some of the remarks made both in Precision Shooting and elsewhere about some of Bob Stinehour's remarks about the Mark V action, I think that some of his readers do not know that this gent Bob knows his apples. After reading his comments on bedding in the June 61 issue of P. S. and his statement that it was an insult to ask a stocker to use glass while bedding a new stock, I felt that this guy was some kind of nut.

During a recent trip to my old home town which is only a few miles from Bob's home. I stopped by to see him. I spent a very enjoyable evening with Bob and his lovely wife and got to see some of this guy's stock work (while consuming more of his beer than a first-time visitor has a right too). For those that doubt his knowledge and craftsmanship in stocking a rifle, I'd advise you to take a look at the end product before blowing too hard. The end product is so neatly fitted and finished that, if painted so the grain of the wood could not be detected, you couldn't tell it from a glass bedding job, (and without some of the draw-backs of glass). The man is a perfectionist and a look around his living room at awards shows he's no slow mover on the bench.

I was sorry to read in Bob's "Beginners Corner" in the August P. S., that the NRA had removed their request to have him write for them on the bench game. I wonder, too, if Mr. Weatherby would be money ahead and have "America's Finest Rifle" if he took Bob's comments on the Mark V action, did a little re-designing for the benefit of the stock, and turn out a really perfect action that will stop splitting stocks. Well, I think so. And a Mark V will not be in my gun case until something is done about this problem.

There are any number of so called gun publications on the newsstands each month, and I call them so called because any darn fool with an idea in his head and takes the time to write it, can get it printed SOMEPLACE! I don't have the feeling that I'm reading just brain-storms in P. S. The breed of cat which we find in the bench shooting game, be he a sporter, varmint or unrestricted shooter, has proven his ideas to his own satisfaction before he goes into print. Modern advertizing methods being what they are, the once a year shooter or hunter will go real big of anything tagged with an additional word of velocity, jet, magnum, super sonic, super duper, deluxe or what have you. Ever notice any of these new numbers setting any records on the bench? Nope, they just haven't been proven and when they are, it will be proved, not advertized.

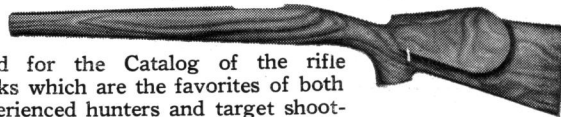
Bob Stinehour is a blunt, to the point writer and he doesn't pull his punches. I don't always agree with him, as I found out during our visit, but he'll hear you out. I surely don't want to see him discouraged by remarks in P. S. and elsewhere and have him stop writing. And that goes for the

HUTCHING'S RIFLE STOCKS

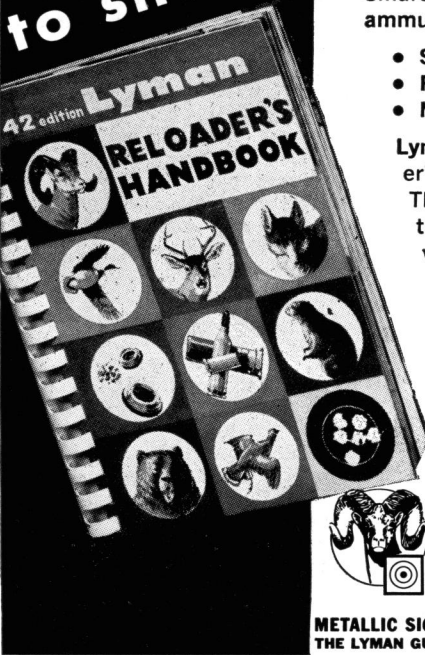
Dealer Inquires Invited
on printed letterhead

Send for the Catalog of the rifle stocks which are the favorites of both experienced hunters and target shooters.

L. B. ROTHSCHILD, Manufacturer, Dept. SP-9 4504 W. Washington Blvd., Los Angeles 16, Calif.



like
to shoot?



RELOAD your own AMMO

Smart shooters everywhere reload their own ammunition:

- Saves money, you shoot more
- Permits tailoring ammo to gun
- Make your own special-purpose ammo

Lyman Reloader's Handbook is handloader's bible . . . has been for over 80 years. This is NEW 42nd Edition, 188 pages, thousands of charts, complete data virtually all cartridges in world, Shot-shell Section most complete anywhere. Hunter's tips, shooting information, fully illustrated HOW TO chapters . . . beautiful color sections. Get yours NOW . . . \$2.00 at dealer's or write.

Xellence through Xperience
in Shooter's Products



Lyman

METALLIC SIGHTS • SHOTGUN CHOKES • RELOADING TOOLS
THE LYMAN GUNSIGHT CORPORATION • MIDDLEFIELD, CONNECTICUT

other regular contributors, for they teach us more than a 90 degree cross wind at 200-yards. God bless them, everyone; I'm for Bob and his kind!

Capt. Rick Hornbeck

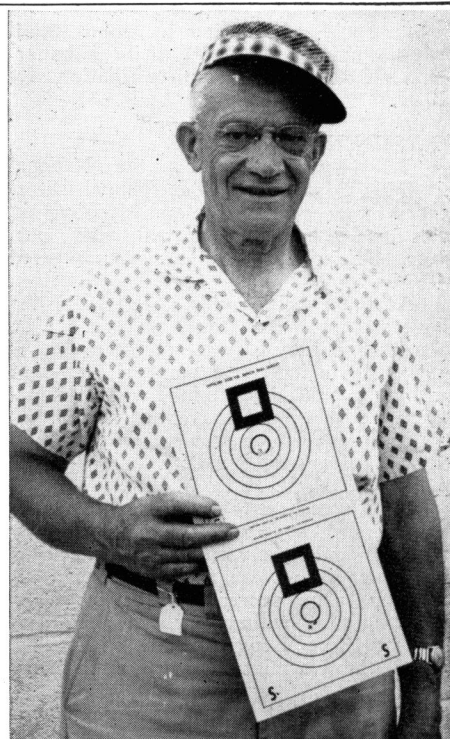
AVERAGE BENCH REST GROUPS

It has been suggested that some people are scared away from bench rest competition from reading only of winning groups and aggregates which are published in reports of the shoots, and that possibly the publishing of the "average" of groups fired would be desirable. With this in view, I have checked the bulletins from several recent representative shoots, both for unrestricted class as well as varmint and sporter classes, in order to get some "average" group statistics to publish. Following is what I have come up with, and I'll admit that I am a bit surprised myself that the "average" groups fired are quite so big.

The published aggregates for the National Match Course (NMC) with unrestricted class bench rest rifles is simply the minute-of-angle (MOA) average for ten matches; five 10-shot matches at 100 yards and five 10-shot matches at 200 yards. Varmint and sporter class aggregates represent the minute-of-angle average of ten matches; five 5-shot matches at 100 yards and five 5-shot matches at 200 yards. The "inch" size of 200 yard groups is twice the "minute-of-angle" size; for example, a 200 yard group measuring one and one half inches, center-to-center of widest bullet holes, is a .750 MOA group.

To determine the minute-of-angle group size for any tournament, I have simply added all the grand aggregates fired

(Continued on Page Eighteen)



Happy Omar Rinehart from Salem, Ohio, with his .258 inch 200 yard 5-shot group target (a probable new record) fired with heavy varmint rifle at the Eastern Region Varmint Championships at Dryden, New York, August 6, 1961. Failure to have a dark backing for the record target leaves the group dimly discernible at 6 o'clock on the center circle.

National Bench Rest Shooters Association, Inc.

NBRSA OFFICERS AND DIRECTORS FOR 1961

EASTERN REGION

Robert W. Hart (President)
300 West Fourth St.
Nescopeck, Pa.
Paul O. Gottschall (Deputy)
R. D. 4
Salen, Ohio
Brunon Boroszewski (Deputy)
Chestnut Ridge Rd.
Orchard Park, New York

MID-CONTINENT REGION

R. G. Berry (Vice President)
Pawnee, Okla.

MISSISSIPPI VALLEY REGION

Alfred W. Walter
1925 Raft Dr., Hanley Hills
St. Louis 33, Missouri

GULF COAST REGION

Robert W. Smith
6806 Lake Shore Drive
Dallas 14, Texas

NORTH CENTRAL REGION

Walt C. Siewert
Box 749
Custer, South Dakota

NORTHWEST REGION

Dr. Rod Janson
606 West Galer
Seattle 99, Washington

SOUTHWEST REGION

John B. Sweany
187-A Silverado Trail
Calistoga, California

Secretary-Treasurer

Bernice E. McMullen
603 West Line St.
Minerva, Ohio

NBRSA MEMBERSHIP DUES:

Individual annual dues \$5.00 (includes magazine subscription for membership term). Associate member (wife or husband, son or daughter under 18 years of age, of member in good standing—no magazine) \$2.50. Life membership, \$75.00. Annual club affiliation fee \$10.00.

PRESIDENT'S CORNER

When you read this the National Matches will be over. The annual Directors' meeting will be over and decisions on rules and other matters will have been made. The question is, are you pleased with the results?

As I am writing this (Aug. 15th) the above are problems that are yet to be solved. It is very easy to solve these problems from an individual point of view and for that individual. I think we all know what we would like to have, but your directors must solve these problems in a manner that will please the majority and for the good of the N. B. R. S. A.

We have many requests for rule changes, such as; cutting down the width of sporter and light varmint stocks, placing of magazines in these rifles, removing all limits on scope power, establishing class weight on rifle without scope, adding a class for Store Bought rifles, eliminating one of the varmint classes, and many others.

I am sure that the requests are sincere and have merit, but the reaction that comes with each change must be analyzed; for example:

Suppose we were to remove all scope power limits on the Sporter class. The shooter who has a case full of guns and scopes will probably be happy, but, let's look again to the shooter who wants to participate, who is raising a family or who just doesn't have funds to spare. This shoot-

er has saved for the past year or longer to buy a gun and scope (8X), he has attended several matches and had some pleasures that we all enjoy, and now we remove the limitations on scope power. What about him? He is sure to be disgusted and may quit the sport. Don't say he can compete with his 8X scope against unlimited scopes. He won't and you would not either.

The above is used as an example to show you one angle in considering a rule change. There are many others that will bring a reaction of one type or another. We are in a sport that is moving fast. Improvements are rapid and a situation like this is sure to demand changes. Let us hope that the changes made will strengthen our organization and improve our sport.

I assure all that your directors will give the best of their ability and much of their time on August 31 and September 1, 2 and 3 to solve these problems.

And now that it is all over I sincerely hope that you are pleased, but, if not, will you sit down and analyze both sides and if you are still displeased we beg your tolerance. We did what seemed in the best interests of all concerned.

Until October,

Bob Hart

NEW AGGREGATE RECORD

A certificate has been awarded to Lawrence S. Rucker, 803 Coburn St., Akron, Ohio for shooting a new aggregate record of .251 inch average for five 10-shot matches at 100 yards with unrestricted bench rest rifle.

The new record was shot in a night shoot at Reed's Run Rifle Range, Augusta, Ohio, on June 17, 1961.

Equipment used was: 222 Jet Magnum cartridge, Remington action with Brown Sleeve, Hart barrel, 28" long, 1 1/4" diam., 1 in 14" twist, Unertl 24X scope. Load was 26 grs. of Ball C powder, 55 gr. bullet made in B&A dies, and Federal primers. The rifle was gunsmithed by Dempsey Frost of Akron, Ohio, and stocked by W. M. Brown of Augusta, Ohio.

1961 BENCH REST MATCHES

MID-CONTINENT REGION

Wichita, Kansas: Varmint class: Oct. 15; Wichita Bench Rest Rifle Club, Larry Engelbrecht, Sec'y, 122 Gow, Wichita 3, Kansas.

Kansas City, Kansas: Oct. 21; Mill Creek Rifle Club, Inc., L. F. Carden, Sec'y, 2211 North 44th St., Kansas City 4, Kansas.

Tulsa, Oklahoma: Oct. 8; Tulsa Bench Rest Rifle Club, Inc., E. A. Anderson, Sec'y, 3604 So. Toledo, Tulsa, Oklahoma.

Tulsa, Oklahoma: Oct. 29 on John Zink Range; sponsored by Hot Springs Gun Club, Thomas E. Gillman, Sec'y, 101 Entrance St., Hot Springs, Arkansas.

EASTERN REGION

(Unrestricted Rifles)

Southboro, Mass.: Oct. 15; Southboro Rod & Gun Club, J. W. Baldwin, P. O. Box 402, Westboro, Mass.

MISSISSIPPI VALLEY REGION

Richmond, Indiana: Oct. 22nd; unrestricted class; The Fraternal Order of Police, Richmond, Indiana.

SOUTHWEST REGION

Fresno, California: October 21 and 22, Regional Championship; Fresno Rifle Club, Henry C. Wright, 4663 East Olive, Fresno 2, Calif.

Bench Rest Match Reports

ST. LOUIS, MISSOURI

Eight riflemen competed in the last Sporter class bench rest shoot of the Bench-rest Rifle Club of St. Louis for 1961 on

August 13th with shooting conditions unusually good for this range.

A. J. Freund, shooting a 6 m/m International in a Douglas barrel on Shilen action, with load of 32 grs. 3031 powder, his own 73 gr. bullets made in Bahler Die Shop dies and CCI primers, won all the aggregates with an outstanding performance. His 200 yard aggregate, fired first, was .600 MOA, his 100 yard was .546 and his grand aggregate was .573 MOA. He beat all existing St. Louis range records for Sporter rifle and his targets have been submitted for NBRSA official record judging.

Jim Ernst, shooting a restocked Remington 722 in .257 Roberts caliber, with load of 38 grs. 4895, Sierra 75 gr. bullets and CIC primers, was runner-up in all the aggregates with .804 MOA at 200 yards, .906 at 100 yards and .852 in the grand aggregate.

Arthur M. Freund, the club secretary, shooting a .257 Roberts in Neidner barrel on Springfield action, with load of 47 grs. 4831, 100 gr. Sierra bullets and CCI primers, was third in the grand aggregate with 1.256 MOA.

WAPWALLOPEN, PENNSYLVANIA

Thirty-seven shooters, coming from an area extending from Maine and Virginia to Ohio, participated in the inaugural unrestricted bench rest rifle shoot on the new Council Cup Range at Wapwallopen, Pa., August 12th and 13th.

We have no report of shooting conditions, weather-wise, but from the fact that over one third of the 100 yard aggregates were under half-inch it would indicate that conditions were favorable on Saturday. However, only four 10-shot groups of under one inch were fired at 200 yards on Sunday and less than one third of the aggregates were under one minute-of-angle.

Five high in the 100 yard aggregate were: Ralph Stolle, Sr. .351; Paul Gottschall .377; Eldon Stolle .404; Ed Shilen .413; Clyde Yockey .418.

Five high in the 200 yard aggregate were: Homer L. Culver .704 MOA; Paul Gottschall .749; Omar Rinehart .751; Clyde Yockey .765; Clarence Aumiller .865.

Paul Gottschall won the NMC aggregate with a .563 MOA and was followed by Clyde Yockey with .591, Omar Rinehart .619, Homer Culver .621, and Eldon Stolle .673.

Only three shot other than .22 cal. rifles. L. S. "Cowboy" Rucker shot a .243 in Hart barrel on Weber action and aggregated .500 for the 10-shot matches at 100 yards, a .989 at 2-yards and .744 MOA for the NMC. Brunon Boroszewski shot a .308 Win. cal. in Hart barrel on Rem. 722 action and aggregated .627 at 100 yards, .890 at 200 yards and .758 for the NMC. E. H. Sheldon, with a 6 m/m Int. in Hart barrel on Rem. 722 action, fired only the 100 yard matches and had a .736 aggregate.

SOUTHBORO, MASSACHUSETTS

Sixteen shooters, four of them getting their first taste of registered bench rest competition, participated in the Southboro Rod and Gun Club's August 20th shoot.

Shooting a course of five 5-shot matches and five 10-shot matches, all at 100 yards, Dr. Alonzo Garcelon won the grand aggregate with a ten match average of .445". Bob Stinehour was second with .4695 and Mayr Hollidge third with .5095.

Robert Stinehour, Jr. lowered the 5-shot group range record with one of .155". Mary Hollidge's .270" was smallest ten shot group.

(Continued on Page Thirteen)

EIGHTH ANNUAL NATIONAL BENCH REST RIFLE CHAMPIONSHIP TOURNAMENT EQUIPMENT USED BY "TOP TWENTY" IN CHAMPIONSHIP AGGREGATE

	Cal.	Action	Barrel	Scope	Powder Charge	Bullet	Primer
Cline Deere	.222	'98 Mauser	Hart	Lyman 25X	23 grs. Ball C	Own B&A	Rem.
Ralph Stolle, Sr.	.222½	Culver	Hart	Unertl 24X	21.8 grs. 4198	Culver	RWS
Eldon Stolle	.222M	Culver	Hart	Unertl 24X	23.5 grs. 4198	Culver	RWS
Paul O. Gottschall	.222	Own	Hart	Unertl 24X	20.5 grs. 4198	Own B&A	Rem.
L. E. Wilson	.219 Don	Own	Hart	Unertl 32X		Own	
Chester Pluth	.222M	Hart	Hart	Unertl 36X	23.5 grs. 4198	Own	Rem.
Bernice McMullen	.222½	Sleeved Rem.	Hart	Unertl 24X	22 grs. 4198	Own B&A	Rem.
Henry W. Barton	.222	Sleeved Rem.	Douglas	B&L 8-24X	23.5 grs. Ball C	Own B&A	Rem.
Omar Rinehart	.219 Don	FN Mauser	Hart	Unertl 24X	26.5 grs. 3031	Own	Fed.
Olin Davis	.219 Don	Culver	Hart	Unertl 24X	26.4 grs. 3031	Culver	CCI
Homer L. Culver	.219 Don	Culver	Hart	Unertl 24X	26.8 grs. 3031	Culver	CCI
I. E. Potter	.222	Remington	Hart	Unertl 30X	24 grs. 4895	Own B&A	Rem.
W. T. Hopfengardner	.222	Remington	Holmes	Unertl 30X	20.5 grs. 4198	Own B&A	Rem.
Ed McNally	.219 Don	Forster	Hart	Unertl 24X	26.5 grs. 3031	Own B&A	Fed.
Bob Stinehour	.219 Don	Remington	Hart	B&L 8-24X	3-31	Own B&A	Rem.
A. H. Angerman	.222M	S & L	Hart	Unertl 24X	23 grs. 4198	Own B&A	West.
Clarence Aumiller	.222	Remington	Hart	Lyman 20X	21 grs. 4198	Own	Rem.
Lawrence Rucker	.222M	Weber	Hart	Unertl 24X	26 grs. Ball C	Own	Rem.
George McMullen	.222½	Sleeved M70	Hart	Unertl 24X	22 grs. 4198	Own B&A	Rem.
Alfred K. Glendening	.222M	Hart	Hart	Unertl 24X	27.1 grs. Ball C	Own B&A	Rem.

"TOP TWENTY" IN THE CHAMPIONSHIP AGGREGATE

CLINE DEERE, Washington Court House, Ohio .4399
RALPH STOLLE, Sr., Landover Hills, Maryland .4482
ELDON STOLLE, Landover Hills, Maryland .4659
PAUL O. GOTTSCHALL, Salem, Ohio .4716
L. E. WILSON, Cashmere, Washington .4829
CHESTER PLUTH, Lakeport, California .4880
BERNICE McMULLEN, Minerva, Ohio .4884
HENRY W. BARTON, Wichita, Kansas .4900
OMAR RINEHART, Salem, Ohio .4920
OLIN DAVIS, Alexandria, Virginia .4975
HOMER L. CULVER, Silver Springs, Maryland .4997
I. E. POTTER, Dayton, Ohio .5015
W. T. HOPFENGARDNER, Dayton, Ohio .5034
ED McNALLY (Presently a "Roving Ambassador") .5044
BOB STINEHOUR, Wallkill, New York .5058
A. H. ANGERMAN, Wilmington, Delaware .5067
CLARENCE AUMILLER, Yeagertown, Pennsylvania .5128
LAWRENCE RUCKER, Akron, Ohio .5144
GEORGE McMULLEN, Minerva, Ohio .5208
ALFRED K. GLENDENING, Margaretville, N. Y. .5263

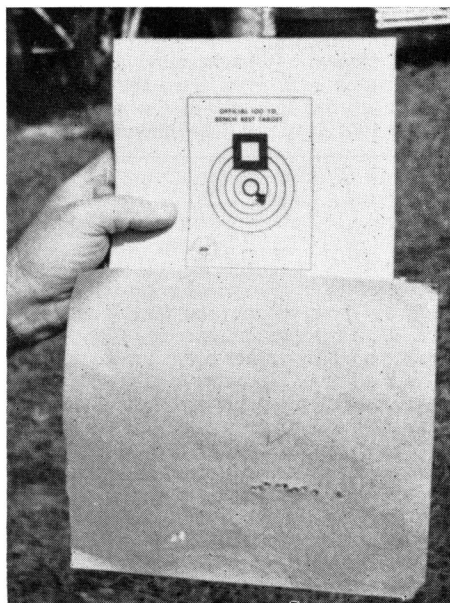
After four days of grueling competition with unrestricted bench rest rifles on the Pine Tree Rifle Club range at Johnstown, New York, Aug. 31 and Sept. 1-2-3, Cline Deere from Washington Court House, Ohio, emerged the 1961 champion by beating the field of nearly 80 competitors. It was one of the most hotly contested National Bench Rest Shoots on record with the winner in doubt until the targets from the last match were measured.

In addition to winning the National Championship, Cline shot a 10-shot group at 100 yards on Friday which was range measured as .169 inch and will without doubt be a new national group record target.

Cline's 42 pound rifle gets a lot of notice and comment, due in part to it being transported too and from the benches on a golf cart, but it was exceeded in weight by L. E. Wilson's 47 pounder and Ferris Pindell's 48 pound gun.

Weather-wise, while the temperature was not excessively high the humidity was close to the saturation point throughout the four shooting days. Light tended to be dull for the first matches in the morning but brightened by mid-forenoon. A hazy ground fog on Friday morning all but obscured the 100 yard target butts until minutes before time for shooting to start. While a couple very light showers on Saturday was the only rain during shooting time, threatening clouds on that and other afternoons did provide light-change problems to contend with. Winds were so light during most of the shooting time that it made the generally heavy mirage hard to figure out for many of the shooters and made even the best of 'em grumble at times.

An examination of the "Top-Twenty" ranking will indicate the keen competition



The record breaking 10 shots at 100 yards group target and backer strip which was shot by 1961 National Bench Rest Champion Cline Deere of Washington Court House, Ohio, on Friday afternoon, September 1, 1961, at Johnstown, New York, in one of the championship matches.

in this tournament. Though not directly comparable with previous championship aggregates due to the fact that the course of fire was doubled this year—200 record shots instead of the past 100 shots—the number ship course aggregates was more than double the number in any previous National shoot. Cline Deere's winning aggregate was next to the smallest to win a National

Championship; Sam Clark's .4098 in 1955 still stands as a record. The .0864 minute-of-angle spread between the winner and 20th place is the smallest on record, as is this year's 20th place aggregate of .5263.

A highlight of the tournament, not necessarily unexpected, was the fine performance of Eldon Stolle, still a junior member of the NBRSA. Being beaten by "Pop" was not due to respect for an elder but just because "Pop" shot better in this tournament. Eldon appears to "shoot because he likes to shoot," has the temperament and personality to absorb the teaching and coaching his father could so capably give, and profit from the competitive experience that has been made available to him the past two seasons in particular. He is a fine young gentleman and sportsman that even an ornery old geezer like this reporter can respect as well as like.

Now, to the top shooting as indicated by the aggregates. At the end of the first day's shooting Ferris Pindell was in the lead with a .3274 aggregate, Henry Barton 2nd with .3794, Clarence Aumiller 3rd with .3878 and Irv Potter 4th with .3950.

The second day, Friday, L. E. Wilson moved into a familiar top-dog spot with his .3038 aggregate. Cline Deere was 2nd with .3192, Ralph Stolle 3rd with .3250, Irv Potter again 4th with .3410, Eldon Stolle 5th with .3582 and Chet Pluth 6th with .3594. A total of 17 had under .400 aggregates that second day.

Ferris Pindell dropped a little behind for the second day at 100 yards but not enough to keep him from winning the 100 yard championship with his .3508 aggregate for the two days. Wilson was 2nd with .3533, Deere 3rd with .3619, Potter still 4th with .3680, Ralph Stolle 5th with .3706, Eldon Stolle 6th with .3837, Clarence Aumiller 7th with .3852. Lawrence "Cowboy" Rucker and Chester Pluth each had .3930 for 8th and 9th spots.

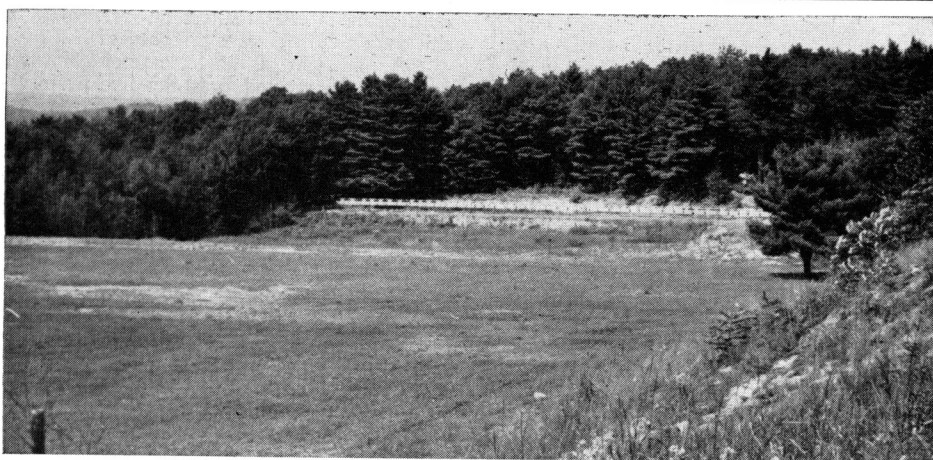
A couple of new names got into the aggregate win column for Saturday's 200 yard shooting. Ralph Stolle won the day's aggregate with a .4459 aggregate and at that time seemed like a good one to bet on to win the championship. Defending champ and a former 200 yard record holder Homer Culver was 2nd with a .4772, Bernice McMullen was 3rd with .4880, Eldon Stolle 4th with .4935 and Henry Barton 5th with .5123. A total of 22 were under a .600 aggregate that day.

The final day, Sunday, Cline Deere put the pressure on and came from behind to win the 200 yard championship with .4766 and thereby clinch the National title. Paul Gottschall was another to come from be-

(Continued on Page Twelve)



The 50 bench firing line at the Pine Tree Rifle Club range at Johnstown, New York, with part of the tree shaded competitor parking and camping area in the background, as it was filled during the firing of the 1961 National Bench Rest Championships.



The 200 yard target butts with easy-on-the-eyes pine-woods background at the Pine Tree Rifle Club range at Johnstown, New York. The range is level from the firing line to just beyond the 100 yard target line, then takes a several-foot dip to rise to the level again at the 200 yard butts. Photo made during the 1961 National Championships.

hind to take 2nd spot in the 200 yard championship and a 4th spot in the National. Al Walter from St. Louis, Mo. and Mississippi Valley Region director was 3rd with .5098, Homer Culver was 4th with .5442 and always-a-threat Omar Rinehart from Salem, Ohio was 5th with .5458. (All 200 yard and National aggregates are for minute-of-angle.)

Following a splendid banquet of delicious roast beef backed up by a generous supply of equally delicious trimmings at the Pine Tree Rifle Club House on Sunday evening, the principal winners for all four days and the championship were announced and prizes awarded—a pleasant, companionable and happy ending for a fine tournament.

EQUIPMENT USED: The equipment tabulated for the "Top Twenty" indicates the trend for the 83 registration cards from which the equipment data was copied by this reporter. Hart barrels were reported by 58, 15 reported Douglas barrels (one shooter listed two rifles, one with Hart and the other with Douglas barrel), 5 used Johnson P. T. barrels, 2 shot Ted Holmes barrels and 2 used Pride barrels, 1 reported an Apex and 1 a Marlin barrel.

Scopes also followed the "Top Twenty" trend with 59 using Unertl, 14 the Bausch & Lomb 8-24 (most of the B&L's with a custom made rear mount) and 9 used a Lyman scope. Scope power from 20X through 25X was favored by the majority of the shooters and not a single scope lower than 20X was reported this year.

Only 5 rifles larger than .22 caliber were listed. Of the .22's, 32 were the .219 Don and the balance were of the Remington .222 and .222 Magnum family. The so-called .222½ is the .222 Magnum case wildcatted to give a powder capacity about mid-way between the standard and Magnum .222 cartridge and it seems to be growing in popularity among the benchers.

All of the .22 caliber bullets reported were either home-made by the shooter or were the hand-made product of small custom bullet makers. 37 listed their bullets as being made in B&A dies and we are reasonably sure that a good number of others were made in the B&A dies.

Approximately one third of the rifle actions were listed as "own" or were the custom made heavy, rigid jobs. A considerable number of others were "sleeved" commercial actions.

SHOOT OPERATION: The Pine Tree Rifle Club handled the shoot operation in their usual competent and efficient manner. Young people had been recruited for the target detail but they had been well trained, were competently supervised and did a fine job.

Stationary backers had their first trial at this shoot and while they did add to the work of operating the matches, they certainly proved their worth by eliminating doubt and argument—the shooters could be shown just what had happened.

Some errors were made by the target measuring detail, but that is quite expect-

able when such a large number of targets have to be measured (nearly 500 a day) and a real effort made to get results posted promptly on the preliminary bulletins. When obvious errors were detected they were corrected cheerfully. One such error correction that I personally observed meant the difference of that competitor being in the "Top Twenty" group instead of out of it—and the error was corrected while a full day of competition was still ahead. The scoring detail did a fine job and are due their full share of commendation.

The experienced and very competent range officer managed the firing line in his usual pleasant, cooperative but firm manner which contributed much to a smooth running, pleasant shoot.

Match shooting begun at 10 A. M. on Thursday and at 9 A. M. the following three days and six matches were fired each day—a warm-up match in the morning, followed by the five championship record matches, all 10-shot matches, and two relays firing. Even with a most efficient target detail, it required considerable time to change the 50 targets, the stationary backer target feature adding somewhat to that time, but record shooting was completed by 4 or 4:30 P. M. each day. There was plenty of time for competitors to do their reloading and still have time for considerable visiting between their shooting turns at the bench. It seemed to this reporter to be just about the most leisurely and pleasant bench rest shoot he has ever attended, and he has been attending bench shoots for quite a number of years.

RANDOM COMMENT: Superior gun-scope-ammunition combinations are a requirement for ranking high in championship shoots; but the equipment alone can't do the job. We heard Ralph Stolle admit that **ONE** misjudged shot on Sunday put him from probable 1961 national champ to runner-up spot.

Even the most experienced benchers have their periods of equipment troubles and problems and it is especially frustrating when they occur during an important competition. Bob Smith from Texas, a former national champ and who has placed among the top three in more national shoots than any other person, was fighting an ornery new gun throughout the shoot and didn't get his problems licked throughout that time—an especially frustrating experience after traveling thousands of miles to compete.

Ed McNally, 1954 national champ and the person who has placed in the "Top Twenty" more times than any other, had his bolt start sticking on Saturday to such an extent that he had to pound it open with a hammer. In spite of that handicap, which made it necessary to take the rifle off the rests between shots, he made the smallest 200 yard group shot that day. And with that equipment problem continuing to plague him through the final day's shooting on Sunday, he was still able to hold his place in another "Top Twenty." With the importance of uniformity in shooting technique being stressed all the time (and we won't argue against that), experiences such as Ed's (and they have happened before) make one wonder—perhaps it is a case of "mind over matter."

Emory Tooley shot his .45-70 bench rifle in one or two of the 200 yard matches on Sunday, just "to see what it would do at 200 yards." The "WHAM" of that big bullet arriving at the target and impact area was something unique in bench rest shooting. Don't know just what the group size was but Emory seemed quite content with his experiment.



Bob Snowball from Montreal, P. Q., a regular observer and information gatherer at the annual bench rest matches on the Pine Tree Rifle Club range at Johnstown, New York. Slung from his shoulder is the portable tape recorder which he was using to record his notes. Bob is a frequent contributor to the Precision Shooting discussions.

The camping area was well filled with both trailers and tents, more than we have ever observed before in our years of attending Johnstown shoots. The trend of camping at shoots seems to be growing. The saving on the lodging expense item is certainly of some importance, and most people are finding that "living on the grounds" is an enjoyment bonus as well.

Since the Directors' meetings had progressed better than had been anticipated, the "report to the members' meeting" was held at the conclusion of shooting on Saturday instead of on Sunday. We will let the NBRSA officers report that meeting. However, it was announced at that time that the 1962 National for unrestricted rifles would be at Tulsa, Oklahoma, again, and that the Varmint and Sporter Nationals would be held in the Eastern Region, with location and dates left for later decision by the Region.

P. H. T.

Bench Rest Match Reports

(Continued from Page Ten)

EASTON, OHIO

C. A. Mauk, Ambridge, Pa., won the Ohio State Championship for unrestricted bench rest rifles with a .416 MOA aggregate for the NMC. George McMullen, Minerva, Ohio was second with .439 and Clarence Aumiller, Yeagertown, Pa., third with .469.

The shoot was conducted by the Chippewa Rifle Club July 29-30, on their Easton, Ohio range.

Dempsey Frost, Akron, Ohio, won the Varmint class championship with a grand aggregate of .499 MOA. Stanley Buchtel, Wauseon, Ohio, was runner-up with .541.

At the Chippewa Club's June 10-11 shoot, George McMullen made a clean sweep of the unrestricted class NMC aggregate, having .294 at 100 yards, .471 and 200 yards and .382 for the NMC. Bernice McMullen backed up husband George with a 4th place .422 at 100 yards, 2nd place .516 at 200 yards and a .468 for 2nd in the NMC aggregate. Paul Gottschall was third in the NMC with .487, Ernest Scafuri fourth

PRECISION STAYNLESS STEEL MATCH TARGET BARRELS

Blanks in calibers .224, 6mm and .30 caliber available.

.22 rim fire blanks sold installed in customer's action only.

For prices and particulars, write:

Hart Rifle Barrels, Inc.

LaFayette, New York, R. D. #2

Telephone Tully, N. Y. Area 315 NX 6-5624

Your 6 m/m will be at its best if you

USE SPINTRU — 7-S BULLETS

Double processed and individually weighed.

73 or 87 grain, \$7.50 per C plus postage.

CRAWFORD H. HOLLIDGE

Marstons Mills, Mass.

with .495 and Clyde Yockey fifth with .505 MOA.

Gottschall won the Varmint class grand aggregate with a .516 MOA, .005 MOA under Cowboy Rucker's .521.

BUFFALO, WYOMING

A small field of 11 capable competitors representing 6 states (Ariz., Calif., Wash., Mont., So. Dak. and Wyoming) participated in the 8th annual Mid-Year Shoot of the Buffalo Outdoor Rifle Club, July 15-16, with excellent shooting conditions.

L. E. Wilson from Cashmere, Wash., made a clean sweep of all the aggregates in both unrestricted and heavy varmint classes, winning or placing in the top three in 17 of the total of 20 matches fired. The varmint class matches were fired in the daytime and the unrestricted rifles were fired at night under lights.

Wilson won four of the fired heavy varmint class matches, placed 2nd in two, 3rd in two others, aggregated .4902 at 100 yards, .6114 at 200 yards and .5508 MOA for the grand aggregate. Clair Hollingsworth from Rapid City, S. D. was 3rd at 100 yards with .6108, 3rd at 200 with .7539 and 2nd in the grand with .6823. Bruce Pheasant, Buffalo, was 2nd at 100 with .605 and 3rd in the grand with .725. Bob Rowland from Los Angeles was 2nd in the 200 yd. aggregate with .6852 MOA.

With the unrestricted bench rifles, Wilson won six matches and was 2nd in three, aggregate .3066 at 100 yards, .4789 MOA at 200 yards and .3927 for the NMC. Hollingsworth was 3rd at 100 yards with .3828, 2nd at 200 yards with .5582 and 2nd in the NMC aggregate with .4705. Walter Tynes from Great Falls, Mont. was 2nd at 100 yards with .3494 and 3rd in the NMC with .5355. C. S. Pool from Los Angeles was 3rd at 200 yards with .6568 MOA.

SAN ANGELO, TEXAS

Thirty-one shooters competed in the third annual Texas State Varmint and Sporter Class Championships at San Angelo, August 12 and 13. There were 14 competitors in the Heavy Varmint matches, 22 in Light Varmint and 20 in the Sporter class matches.

The five high grand aggregates for Heavy Varmint class were, in MOA: Wm. S. Coleman .642, R. R. Robinson .648, Paul Lester .676, E. L. Thomason .789 and Marie Spencer .813.

For Light Varmint class the five high were: Paul Lester .622, (Mrs.) Jimmie McLaren .680, J. L. Bonner .69445, John I. Moore .69455 and C. A. Morris .720.

With the Sporter class rifles it was: Ralph R. Saylor .666, Eugene Lee .806, R. L. McLaren .859, J. L. Bonner .901 and John I. Moore .965.

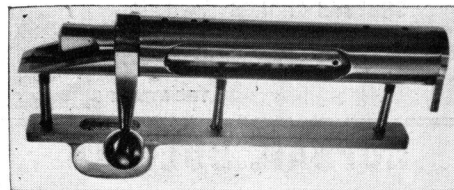
It is interesting to note that the winning aggregate fired in Light Varmint

K. E. SMITTY'S SPORT SHOP
8765 Los Cochess Rd., Lakeside, Calif.

WHERE

PRECISION and SERVICE

"Rule the Roost." Only the BEST is good enough. 25 years of Tool and Gun Making.



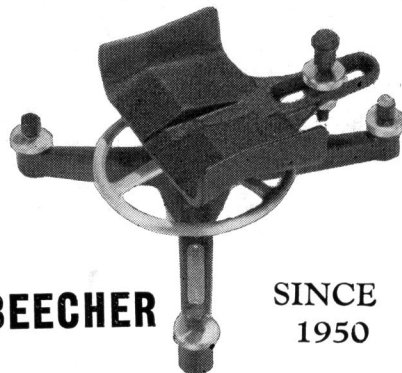
SHILEN ACTION \$95.00

222 or 308

Also available—Barrelled Actions, Semi-finished stocks, and complete rifles.

SHILEN RIFLES

Dryden, N. Y.



BEECHER

SINCE 1950

CUSTOM MADE NOW \$30.00

Postpaid in U. S. A.

2155 Demington Dr., Cleveland 6, Ohio

class approximately equaled those in the Heavy Varmint class, and this was true in the sub-aggregates.

Winning 100 yard aggregates were: Heavy Varmint, R. R. Robinson .598; Light Varmint, John I. Moore .609; Sporter, Ralph Saylor .680. Winning the 200 yard aggregates were: Heavy Varmint, Wm. S. Coleman .619; Light Varmint, Paul Lester .545; Sporter, Saylor .652.

Two shot 6 m/m rifles in all the Heavy Varmint matches (Marie Spencer a 40X Remington in .244 Rem. cal.) and one a 6 m/m in the 200 yard stage. Three (Continued on Page Fourteen)

RELOADERS

get micrometer precision
assembly-line speeds . . .

own both the NEW Lyman-Ohaus "505" Scale and the all-time favorite Lyman #55 Powder Measure . . . a terrific combination for super-fast, super-sure reloading!

LYMAN #55

POWDER MEASURE:

mounts on shelf, bench or directly on turret type presses . . . loads cartridges with uniform, reliable precision at top speed. Calibrated slides and micrometer screws permit wide range of adjustment with all powders. (Price . . . \$16.00). You won't find a better all-around powder measure under any other label. See your dealer or write for 1961 Lyman Catalog #43.



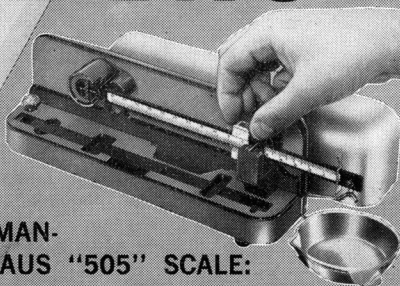
METALLIC SIGHTS
SHOTGUN CHOKES
RELOADING TOOLS



LYMAN-

OHAUS "505" SCALE:

weigh every bullet, every load with 1/10 grain accuracy. Here's laboratory accuracy with exclusive fast-adjusting magnetic damper, wide range (from smallest powder load to heaviest bullet . . . 505 grain capacity). Use the compact "505" to recheck settings on your #55 Powder Measure as you change from powder to powder. (Price . . . \$19.50)



Lyman

THE LYMAN GUNSIGHT CORPORATION • MIDDLEFIELD, CONNECTICUT

HUFNAIL BULLETS

Specializing in custom hand swaged bullets in calibers .22 through .30 that are not available from any other source, to the best of my knowledge. Write me about your needs and your particular bullet problems.

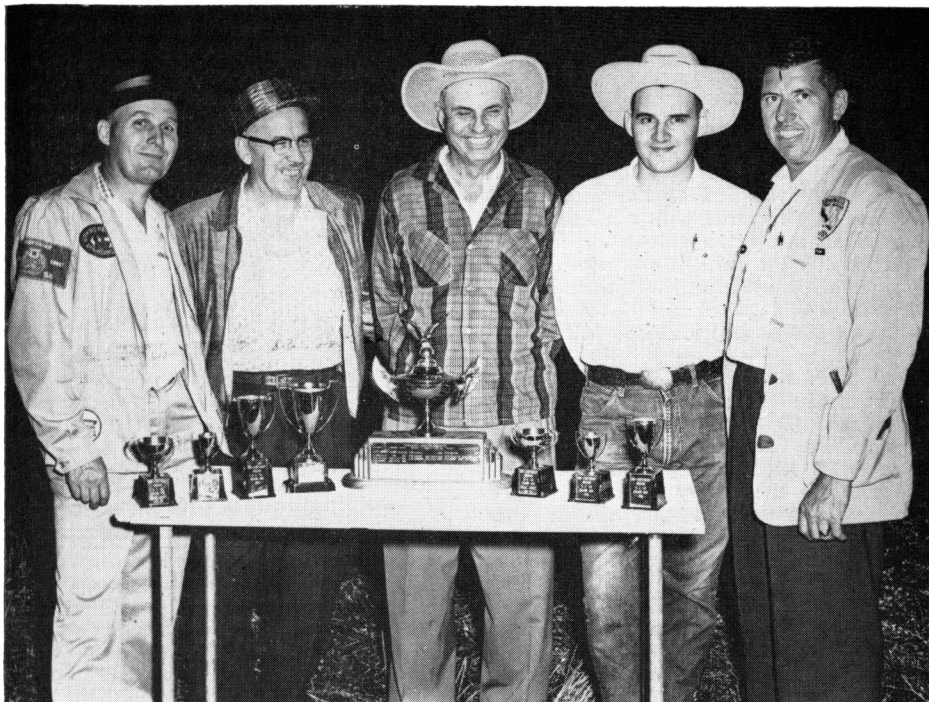
D. B. HUFNAIL
Town Line Road,
Rutland, Vermont

Bench Rest Match Reports

(Continued from Page Thirteen)

shot 6 m/m rifles in the Light Varmint matches (John I. Moore shot a Rem. 40X in the 222 Mag./6 m/m cartridge). Only two fired other than 6 m/m rifles in the Sporter matches.

E. L. Thomason shot a .252" group at 100 yards with Heavy Varmint rifle; H. B. Reagan a .281" group at 100 yards with Light Varmint rifle and a .224" group at 100 yards with Sporter rifle.



Winners in the Mid-Continent Regional Bench Rest Championships, fired at the Mill Creek Rifle Club range near Kansas City, Kans., on August 5th. Left to right are: "Bud" Carden, Kansas City; Henry Barton, Wichita, Kans.; Horace Powers, Okmulgee, Okla.; Dixon Hermon, Omaha, Neb., and Al Walter, St. Louis, Mo.

Later in the month, on their way to the National Championships at Johnstown, New York, Carden, Barton and Larry Engelbrecht (Wichita) made a stop-over in St. Louis, Mo. and with Al Walter did some more winning in the Mississippi Valley Regional Championships.

TULSA, OKLAHOMA

Mid-Continent Director Bob Berry reports that attendance at the Tulsa shoots has shown a good gain this season, with some 30 competitors at their August 19th shoot, and Varmint class shooters outnumbering the unrestricted class 16 to 14.

William Coleman from Burleson, Texas, won the unrestricted class aggregate and his wife Mildred was 3rd—Horace Powers was 2nd.

Mrs. Barbara McDonald from North Little Rock, Arkansas, a member of the Hot Springs Gun Club and a first-year competitor in bench rest matches, won the Varmint Rifle aggregate and shot smallest 100 yard group of .215". Several members of the Hot Springs (Ark.) Club have been regular competitors in the Tulsa matches through the season, most of them shooting in the Varmint Rifle class.

The Hot Springs Club does not yet have moving backers at their home bench rest range, so are not able to hold registered shoots on it yet. But they have secured the cooperation of the Tulsa Bench Rest Club and will conduct a registered shoot on the Tulsa range October 29th. Tulsa Club members will assist the Hot Springs Club in operating the match and the proceeds from the shoot will go to the Hot Springs Club to assist them in installing a moving backer system and be able to hold registered shoots in 1962.

MID-CONTINENT REGIONAL

The Mid-Continent Regional Championships were fired August 5th on the Mill Creek Rifle Club range at Kansas City, Kansas, with 14 shooters. Conditions were good throughout the matches but aggregates were not as small as expected.

Horace Powers won the championship aggregate with a .3885 MOA, Henry Barton had .391, Al Walter .412, "Bud" Carden .434 and Dixon Herman .452.

Barton with .3286 was 100 yards aggregate winner, followed by Powers .349, Walter .3536, Herman .3918 and Carden .4014. Powers took the 200 yard aggregate with .428 MOA, Barton had .4526, Carden .4663, Walters .4699 and Larry Engelbrecht .4747.

ADD BENCH RSST REPORTS ST. LOUIS, MISSOURI

On August 27th the Mississippi Regional Championship Shoot for unrestricted bench rest rifles was fired on the Benchrest Rifle Club of St. Louis range with 9 competing under good to fair shooting conditions.

Four of the nine competitors came from the Mid-Continent Region and they all placed in the top five rankings. "Bud" Carden from Kansas City, Kan., won the NMC aggregate with a .4932 MOA; Al Walter, St. Louis, was 2nd with .5125; Larry Engelbrecht, secretary for the Wichita, Kans., club and director-elect for the Mid-Continent Region, was 3rd with .5225; Henry Barton, Wichita, was 4th with .539; and Horace Powers, Okmulgee, Okla., was 5th with .546.

Al Walter won the 100 yard aggregate with .369; Engelbrecht 2nd with .386 and Powers 3rd with .424. Wm. Schellert, St. Louis, fired smallest group at 100 yards (.245) but disqualified in one of the 100 yard matches. He tied with Al Walter for 3rd place in the 200 yard aggregate, both with .656 MOA.

Bud Carden won the 200 yard aggregate with a .5495 MOA and Henry Barton was 2nd with .561 Engelbrecht had smallest 200 yard group (.640") and his .659 aggregate was 5th.

Carden and Engelbrecht shot .222 cal. in Hart barrels, Barton a .222 in Douglas bar-rel, and Powers shot his wildcatted .220 Swift cartridge.

FOR THE SHOOTER BY A SHOOTER



Mark III BSA .22 Target Rifle— It Is Supreme — It Is Accurate

MARK III Less sights	\$210.00
MARK III with 1-8 Min Parker-Hale sights	\$245.00
MARK III with Freeland sights	\$270.00

Freeland AF55L EXCEPTIONAL
LEATHER RIFLE CASE \$35.00

Freeland SHOOTING JERSEY
heavy weight \$3.30

Freeland Rifle Rest fork 85
JUMBO size \$1.20

Freeland Sling Keeper \$1.25

Kneeling Pad \$3.95

FREELAND ALL ANGLE TRIPOD, in
green, gray or black, mention scope when
ordering \$15.25

FREELAND BIPOD, mention scope when
ordering \$17.50

FREELAND PALM REST, ball type \$12.50



Standard Benchrest Stand \$20.00

Supreme Benchrest Stand \$30.00

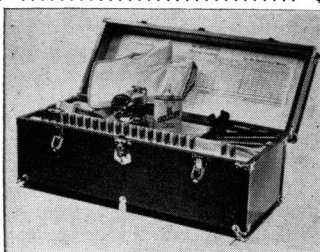


All Angle Tripod



Swiss Type
Palm Rest

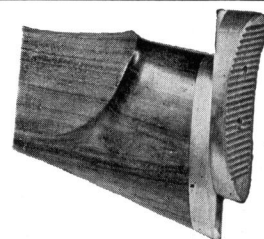
FREELAND SWISS TYPE PALM REST	\$18.50
BALL TYPE PALM REST for the 513 Rem.	\$14.00
BALL TYPE PALM REST FOR MARK III	\$15.50
ALL ANGLE GALLERY SPECIAL TRIPOD	\$16.85
"A" SHOOTING MAT	\$22.00
CEDARWOOD DEWAR CARTRIDGE BLOCK	\$2.30



Freeland 30 Caliber Kit \$13.50

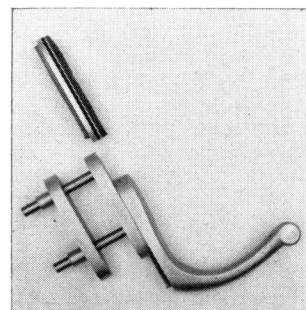
48¾" Rifle Trunk \$26.25

¼ Opening small bore kit \$20.00

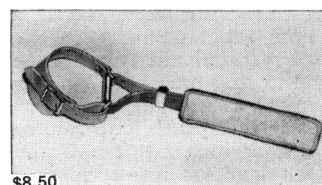


Olympic Butt Plate

FREELAND Adjustable Aluminum Butt Plate ...	\$10.50
FREELAND Base Plate with Free Rifle Hook	\$15.75
FREELAND Butt Plate with Rubber Pad	\$13.00
FREELAND Free Rifle Hook Only	\$8.50
Butt Plate Spacer	\$7.00



Freeland "61" International
Butt Plate \$33.00



\$8.50

Mid-Century Cuff, Comb. \$8.50

DeLuxe Cuff & Hook \$4.25

WRITE US FOR ALL YOUR GUN, SCOPE, MOUNT, SIGHT AND RELOADING NEEDS.
Send \$1.00 for Catalogue, redeemed on first \$5.00 purchase. Freeland and BSA Pamphlets Free

DISCOUNT TO ESTABLISHED DEALERS—PRICES SUBJECT TO CHANGE

In addition to doing ALL GUNSMITHING we fit Douglas and Holmes barrels to rim fire and center fire .22 Caliber target and sporter rifles.

FREELAND'S SCOPE STANDS, INC.

At Freeland, Nationally Known Rifleman

3737 14th Ave.,

ROCK ISLAND, ILL.



Dear Phil:

You missed a couple of good shoots when you weren't able to attend the one at Bob Hart's new range and the one at Southboro. It is a good example how co-operation leads to success. As you will recall, Bob Hart and Cap Baldwin exchanged dates and as a result, I think the attendance at both was helped. Everybody was pleased to see the big crowd that turned out to open Bob's new range and although the shooting conditions were very rough with the large groups that naturally result, I am certain that the shoots which follow at the Council Cup Range will be well attended. Perhaps elsewhere in the magazine, you will have some of the details, but in case they are lacking, I will try to convey some of the outstanding features. Before doing so, however, I want to say that I think

deep appreciation is due Bob and his hard working son and friends who did so much to make the range possible. It is downright inspiring to see a mountainside farm converted by the efforts of a few people into such an ideal modern range.

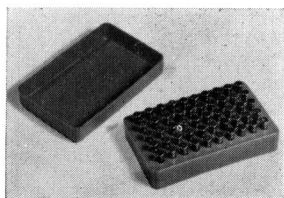
I am sure the old fellow who lived there a generation ago and made his illegal whiskey could not have foreseen the day when there would be a crowd of dead-eye shooters taking over that location. Many generations before that, there were others who never had any reason to expect an influx of benchresters. These people were the Indians of that area who were so intelligent and well organized that they annually drew to that section, surrounding tribes for council, and from the bluffs not far from the range, high columns of smoke used to signal the surrounding tribes to gather. Thus the range was named Council Cup in respect to the old signal fires and the Indians who used their smoke to attract friends from far and wide for counsel purpose. I have always had a soft spot in my heart for the Indians and their ways and experience much pleasure when I think of those days. Later there were troubled days for those people and there must have been many of them gathered on the shores of the river to defend their lands and I am told the flats along the river, adjacent to its

banks, yield arrows, arrow heads and other artifices of this type.

The range itself is very attractively located, and is a little like the range at Lewistown because you shoot slightly uphill for the 200 yard targets.

The benches are a joy to behold and a pleasure to shoot from. For once, they are rugged and sturdy enough to suit everybody. On a separately poured foundation slab for each bench location, the conventional tri-post construction has been improved upon by cement blocks instead of posts, and on top of these blocks, there has been a heavy 2" plank of new white oak bonded to the conventional V frame. Even the oak was treated with a preservative before it was stained and finished, and the benches are big enough for right and left hand shooters to use and far enough apart so that no interference is caused by the usual back bumping that happens so frequently when right and left hand shooters are at adjacent benches. There is a fine wide wooden covering over the entire length of the 15 benches and an adequately wide walk in back of them so that if a shooter has not completed his firing, he is undisturbed by the traffic that passes in back of him.

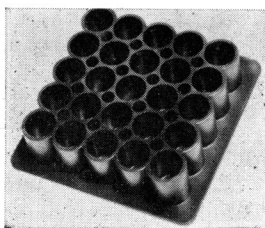
Some of the target system is very similar
(Continued on Page Sixteen)



Cartridge Box
.22 Lr. Cal.

NEW!

"OSTER" Plastic Products



Loading Block
(Range Block)

Capacity—50 .22 LR Cart.
Size—4 $\frac{3}{4}$ x 3 x 1—Wt. 3 oz.
For the 'Plinker'—Target Shooter
Price—\$1.00 Ppd

Capacity—25 cases 3.5-8 x 3.5-8
Sizes—Regular and Magnum
(State which when ordering)
Price 39c—3 for \$1.00 Ppd.

LLANERCH GUN SHOP, Dept. PS Upper Darby, Pa.

Dealers Inquire

10-X RIFLEMAN'S COAT

You'll shoot better in this outstanding coat. New back pockets keep glove, loading block, ammunition handy in any position. Preformed elbow pads are shaped for shooting. Shoulder pad fits sleeve, coat, you and rifle butt. Self adjusting back tension. First choice of riflemen everywhere. Models for ladies, juniors, too.



Write for FREE catalog
10-X MANUFACTURING CO.
227 Third St.
DES MOINES, IOWA

Stool Shootin Stuff

(Continued from Page Fifteen)

lar to that practiced by Cap Baldwin at Southboro for the last four or five years. Individual panels or homosote are used in back of each target and these are readily picked up and replaced by a fresh one with a minimum of time and labor. The framework in which these are placed are constructed so that the back strip is blanked out by a flanking panel on either side of the target board. The moving backing strip was an original and entirely new development. A framework corresponding to a certain number of targets is actuated by a small motor and worm drive but instead of the backing paper being stretched horizontally and subject to wind damage and inconvenience in handling, a new simple system has been developed. The backing strip is on a roll which is mounted in vee brackets and to operate, the paper is merely pulled down to correspond with each target. At the conclusion of the firing, the

paper is pulled another length and stripped off. Thus with each target, there is a corresponding panel of paper which can be conveniently reexamined should a reason occur. I never noticed a minute's holdup in changing relays and the efficiency of the system was amply demonstrated by the clockwork precision with which the shoot progressed.

A few weeks before the shoot, Bob was apprehensive about how the food would be served but he must have tackled the problem in his usual manner because everybody was served amply and well, and in addition to the meals, there was a snack bar available for tonic, ice cream and small treats.

As I mentioned earlier, the groups weren't small. This was a good thing for the game because we need to point out to the many woodchuck shooters who came to see us perform that they, too, on their better days can make many groups as small, and that the small groups we talk about so frequently are not too often attained. I think I can accent this point somewhat by bringing out a couple of examples that occurred recently. One happened to my good friend, Omar Reinhardt who is hard to beat in any crowd. Both incidents occurred at the Dryden Varmint shoot. I had a little bad luck the first thing in the morning when I spilled all of my pre-loaded vials of powder in a slight accident. If it hadn't been for the kindness of Omar in loaning me some which he had pre-loaded, I wouldn't have been able to carry on beyond the first three matches but due to his kindness, I was able to place or win a number of times in the first half dozen or more events and Omar wasn't doing so well. Along about the 7th match he jokingly stopped by my bench and said he noticed I was doing pretty well with his powder even if he couldn't. In less than one quarter of

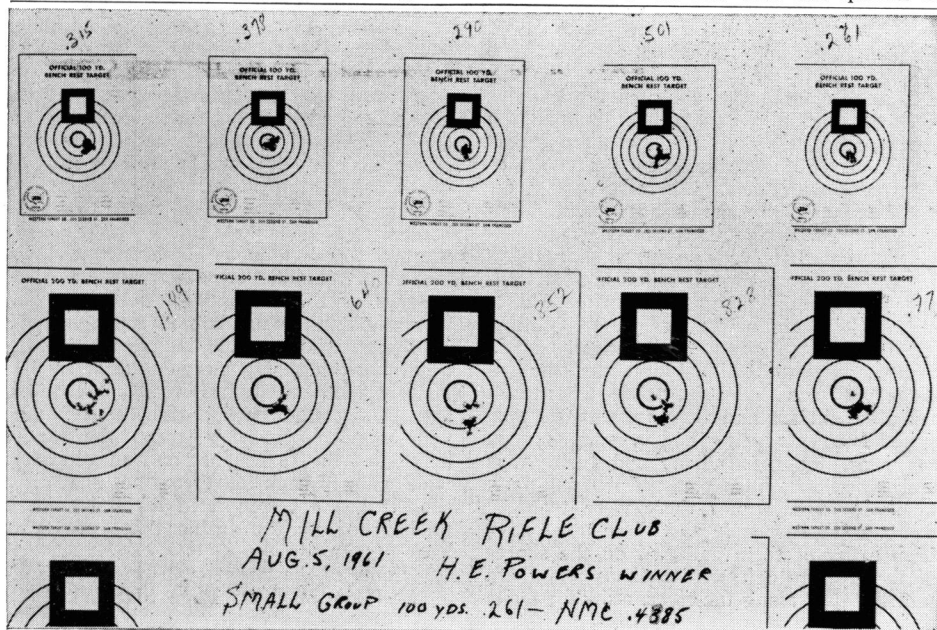
an hour later, he walked by me with a great big grin on his face and I looked down the line to see that he had a little bit of a target, hardly exceeding that of a 35 caliber bullet. In desperation, he had searched through his gear and found a few bullets of 54 $\frac{1}{2}$ grains left over from the last season's shooting, and right as of this moment, I'll bet Omar will be a hard man to talk out of a bullet of that weight because the group which he made may possibly establish a new record for a varmint rifle.

My experience, too, pertains to a small group that may be established as one of record with my sporter. I had been getting along pretty well with my 6 m/m on a light rifle but the next to the last match, my target spread over 2" which didn't make me too happy as I was well up in the aggregate. As a matter of fact, my nearest competitor chided me about the size of that group and when I sat down to the next match, I found I had a very disturbing memory of that 2" target. However, this memory was eradicated from my mind when a second later a cartridge fitted too tightly in my chamber, and I tried to withdraw it. The two minute warning was called before I located a cleaning rod and extracted the case. When one is shooting a hunting scope on a sporter rifle, there is not much time to fire four shots and watch each one through a spotting scope or do much more than make a very hurried analysis of the wind and mirage conditions. Actually the firing time was not more than a minute and when I did consult the spotting scope, I was amazed at the small size of the group which now has been officially measured at .371 as a new record for a sporter rifle at 200 yards. These variations in group size occur with every shooter that I have ever met and we are all prone to accent the good groups.

I have often said a guy should be somewhat of a tinkerer to keep things going in the benchrest game and I think until he has reached that stage that he is not getting the greatest pleasure out of the game. Certainly it will always be a handicap if he has to send his gun back to the maker every time it doesn't do its best.

As I write this, Merry, Jock and I are heading for Johnstown. With us is Jonas Hallgrímsson who has been our houseguest for nearly a week and flew down from Iceland to attend the National Matches. As you will recall, he did that two years ago and he is back again to try to get his gun, which was new on the last occasion, to perform better on this one. If we both do badly, we still will have had a wonderful week talking over old times and new ideas and talking about new guns that neither of us need and about old ones that we wish we still had.

I don't suppose I could really be considered a pioneer bullet maker but even I admit to having done it for sometime, and on some occasions as you will note, I tossed caution to the wind and have come out in print with bullet making articles (Gun Digest, 1962). Well, I want you to understand, Mr. Teachout, there must be some truth in the statement that even old dogs learn new tricks and another along the lines that necessity is the mother of invention. In spite of the marvelous accuracy which we obtain when we buy today's bullets, there is occasionally a jacket in the lots from which they are made that is a little shorter than the others and very hard to detect until it gives you trouble. Because these short jackets don't force up into the die far enough to close the point tight enough for the ejection pin to bear on them, the ejection pin often forces down and leave the bullet jammed in the die. I don't know (Continued on Page Eighteen)



DOUGLAS ULTRARIFLED BARRELS

WORLD'S FINEST PRODUCTION MADE RIFLE BARREL

The quality of DOUGLAS barrels has been proven many times on the target and in the field, both big game and varmint shooting. These barrels hold many records on the target, in bench rest, big bore, and small bore target work. We receive new reports all the time, attesting to their excellence, from the target shooter and hunter. We feel that we are making the finest production made rifle barrel available in the world today. Further, our wide range of sizes and weights, variety of calibers, deliveries, prices and discounts to gunsmiths, add up to a service that is not available from any other barrel maker in the land.

AND NOW DOUGLAS OFFERS BUTTON RIFLED MUZZLE LOADER BARRELS

The finest muzzle loader button rifled barrels available anywhere regardless of price. Made from octagon shaped steel with a smooth cold drawn finish to finish up to 42" long, rifled with 8 lands and grooves, and rifling twist of one turn in 48". Available in three sizes of steel, $\frac{7}{8}$ " across the flats in calibers 32, 36, and 40 (40 caliber will be cut rifled), 1" across the flats in calibers 36, 40, and 45 (45 caliber will be cut rifled), and $1\frac{1}{8}$ " across the flats in 40, 45, and 50 calibers. Any of the above sizes and calibers at only \$32.50 each. Subject to regular gunsmiths discounts.

WRITE FOR FREE LITERATURE ON THESE BARRELS AND THE OTHER FINE BARRELS THAT WE MAKE.

G. R. DOUGLAS CO., INC.

5504 Big Tyler Road

Charleston 2, W. Va.



Crawford H. Hollidge holding his probable record .388 inch 200 yard 5-shot group target fired with Sporter rifle at the Eastern Region Varmint Championships at Dryden, New York, August 6, 1961. The group is dimly discernible at 6 o'clock from the target center. Crawford is also holding the trophy bowl awarded for winning the Sporter Rifle championship aggregate.

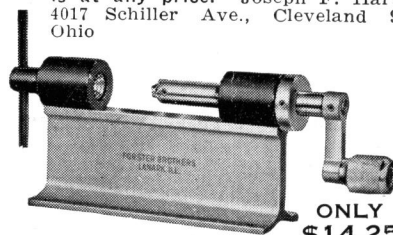
the most accurate results are obtained
the

FORSTER PRECISION CASE TRIMMER

Designed to do the job easier, faster and more accurately, regardless of variations in cartridge head diameters. Super precision and quality are evident in every detail! Now supplied with a gold anodized base for a lasting finish at no extra cost! It's the finest in the field! Accessories available for primer pocket cleaning, neck reaming, outside neck turning, bullet hollow pointing and inside-outside neck deburring.

See and Compare It At Your Dealers
or Write For Free Folder

"Having used your Precision Case Trimmer for the past six months, I have found it to be the best there is at any price." Joseph F. Hart, 4017 Schiller Ave., Cleveland 9, Ohio



ONLY
\$14.25



\$8.95

NEW NEW

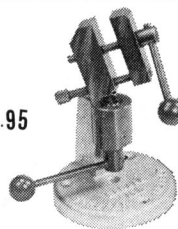
ZEROING
REST

with Anodized Aluminum
Cradle and Base — 2-inch
Vertical Adjustment—Positive
Lock—Light, Compact, Port-
able—for Range and Field.

SWIVOLING
VISE

with Case Hardened Jaws
and Screws. Complete 360°
Rotation, Tilting Head—1-
Inch Opening for the Gun-
smith, Hobbyist and Hand-
yman—in Home or Shop.

\$10.95



SEE AT YOUR DEALER OR WRITE DIRECTLY TO

FORSTER-APPELT CO. 19 E. LANARK AVE.
LANARK, ILLINOIS

T. H. BOUGHTON, Gunsmith

Rebarreling—Chambering — Restocking
Bench Rest and Varmint Rifles built.
Match Bullets, .22 and 6mm from B & A
dies. Repair and accuracy work. NBRSA
Member and Competitive Shooter.

410 Stone Road Rochester 16, N. Y.

SAM BOND •

NEW PHILADELPHIA, OHIO
RETAIL & WHOLESALE
SHOOTING & HUNTING SUPPLIES
CARD FOR LIST

REAMERS GAUGES

6mm INTERNATIONAL
BOTH
HARVEY DONALDSON'S
AND
MIKE WALKER'S
version

For the Gunsmith
115 Calibers from 177 Woodsman
to 505 GIBBS
WRITE FOR NEW CATALOG
H & M TOOL CO.
24062 Orchard Lake Road,
Farmington, Michigan

DON'T MISS A SINGLE ISSUE OF PRECISION SHOOTING

SUBSCRIBE NOW WITH THIS HANDY
COUPON — OR ON YOUR OWN STATIONERY

SUBSCRIPTION FORM FOR PRECISION SHOOTING
64 DEPOT STREET LYNDONVILLE, VERMONT

Please enter my subscription for the period indicated below

- | | |
|---|--|
| ☐ TWO years \$7.00 | ☐ ONE year \$4.00 |
| ☐ THREE years \$9.00 | ☐ FOREIGN 1 year \$5.00 |
| ☐ Payment enclosed | ☐ Please bill me |

Name _____

Address _____

City _____

State _____

CLEANED YOUR GUNS RECENTLY?

Don't let your guns wear out off season. Dust, corrosion, moisture in the air are the greatest enemies of accuracy and long firearms usefulness.

SEND FOR FREE GUN CLEANING GUIDE

FRANK A. HOPPE, INC.

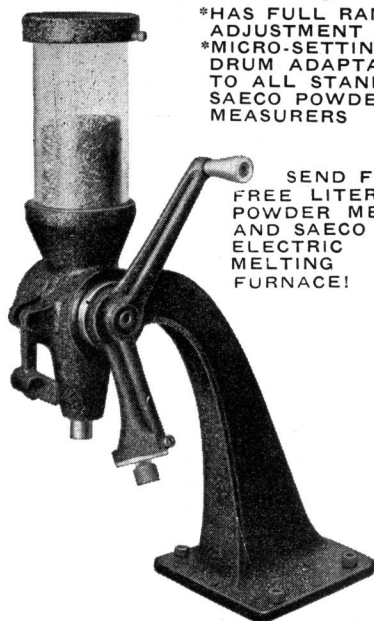
2303 N. Eighth St., Phila. 33, Penna.



SAECO

MICRO-SETTING PRECISION POWDER MEASURE

with CLICK-DIAL Adjustment



*HAS FULL RANGE
ADJUSTMENT
*MICRO-SETTING
DRUM ADAPTABLE
TO ALL STANDARD
SAECO POWDER
MEASURERS

SEND FOR
FREE LITERATURE
POWDER MEASURE
AND SAECO
ELECTRIC
MELTING
FURNACE!

**SANTA ANITA
ENGINEERING CO.**

OF CALIFORNIA
2451 E. Colorado St., Pasadena

Stool Shootin' Stuff

(Continued from Page Sixteen)

how many times through the years I have sworn on this occasion and although I have always been able to remove each of the jammed bullets it has not made me happy. The elaborate measurements that are required to get the die and press set up exactly back to the same specifications as before are time consuming. Either you take the press apart and remove the bullet by inserting through its base a mild steel or brass wood screw or another method that is sometimes used consisting of backing off the depth control nut and the die body so that the die may be inserted deeper into the press and the punch force the short jacket up so that the point is properly formed and later ejected. A third method is to leave the die in place and change to a longer punch if you have one. The other day I discovered a system to make all of these three obsolete and it is so simple, you will laugh when you try it and be very pleased because in a matter of seconds you should be back in your sequence of bullet making with only the loss of the short jacket which caused you the trouble in the first place.

Just take a short cutting of core wire, no more than 3/16" long or cut one of your cores in thirds. Place the short length of wire on top of the punch and fit it up against the base of the stuck jacket. Press firmly on the tool handle and eject in the normal manner. Quicker than you can read it, it will pop your stuck jacket, probably with the point closed up to the normal size, and in most instances, your lead forced to the very top of it. The base of the bullet will intrigue you also because when you remove the lead which is almost bonded to the base, you will find that you have created a practically perfect hollow base bullet. In fact I think it would be a fairly simple way to form a few hollow base bullets if you would like to test them. Merely use a single ball of buck shot between the top of the punch and the base of the bullet and I think you will find they come out pretty uniform.

I sure have had a busy summer at shoots and now Merrie thinks I am rushing the hunting season a little bit because I am taking off with some friends, by airplane, to Newfoundland next weekend to try some moose hunting. I am told that it is a rub-

ber boot country so a Cape Codder ought to do all right but at any rate, I am going to have an interesting report on how my homemade 160 grain 7 m/m bullets perform in my T & R 7 m/m Mauser. Maybe the gun is a little long and heavy to please me but I will never be satisfied until I know more about the terrain and try to tote the gun along in it. Perhaps the Newfoundland guide will tell me I would do better with a 30-30 or a 303 British. It seems to me that the 280 Ross did all right in its day, and to some of you younger shooters, that day goes back so far that it was one of the first guns that I had a yen to own when I should have been thinking more about my multiplication tables and spelling. Cordially yours,

Ernest Stuhlschuter

Average Bench Rest Groups

(Continued from Page Nine)

and divided by the number of shooters making those aggregates.

The Eastern Region unrestricted rifle championships, fired at Lewistown, Pa. early in July, is the most recent such shoot with a sizable number of competitors, comprising most of the better shooters in the Region. Shooting conditions during this tournament were a little more difficult than "average" and winning NMC aggregates were some .100 to .120 MOA larger than many tournaments with a comparable number of competitors. Sixty-one shooters completed the NMC aggregate at this shoot and the "average" MOA group size was .784. The winning aggregate was .601 MOA and the largest aggregate posted was 1.210 MOA.

Taking one of the smaller shoots for comparison, an unrestricted rifle shoot at Plainfield, N. H., with shooting conditions as good or better than average, with 14 shooters completing the NMC aggregate, the "average" MOA group size was .701. The winning aggregate was .4245 MOA and the largest was .921 MOA.

Averaging and comparing statistics from three tournaments at which Heavy Varmint, Light Varmint and Sporter class matches were fired, we come up with the following "average group" sizes for each class:

At the National Varmint Rifle Championships in July, 48 competitors completed the grand aggregate (ten 5-shot matches at each 100 and 200 yards) in Heavy Varmint class. The "average" MOA group fired was .6454. The winning aggregate was .4556 MOA and the largest posted was 1.2179 MOA.

Twenty-two completed the Light Varmint aggregate. The "average group" fired was .7322 MOA; the winning aggregate was .52365 MOA and the largest aggregate posted was 1.53435 MOA.

Twenty completed aggregates in Sporter class. The "average" group fired was .948 MOA; the winning aggregate was .6138 MOA and the largest aggregate posted was 1.36372 MOA.

Shooting conditions during the National Varmint Championships have been generally reported as "difficult."

At the Eastern Region Varmint Championships at Dryden, N. Y. the first week-end in August, shooting conditions could be labeled at least "average good." Twenty-two completed the Heavy Varmint class grand aggregate. The "average group" size was .599 MOA; the winning aggregate was .381 MOA and the largest aggregate posted was .882 MOA.

Nine completed the Light Varmint class aggregate. The "average group" was .795 MOA; the winning aggregate .657 MOA and the largest aggregate posted 1.047 MOA.

TRADIN' POST

Classified type ads; no display. Rates: — 10¢ per word per insertion, prepaid. Minimum charge \$1.00. Closing date for ads is the last Saturday of the month preceding publication.

Groups of figures, abbreviations and initials count as words. Hyphenated word counts as two words. Name and address of advertiser is counted. Use full words instead of initials and abbreviations and make your meaning entirely clear — get your money's worth.

WANTED: PRODUCT. Reilly Machine Works, 445 Western Avenue, Albany, New York.

FOR SALE: 219 WASP, chambered by H. L. Culver, Hart BBL., F. N. Bench Rest action sleeved and fitted to R. W. Stolle stock, stock by Stolle. Fired one match at Reed's Run in spring. Cases and dies, \$150.00. One, 222 Improved, Hart BBL. fitted to H. L. Culver action, with hood, also R. W. Stolle stock, fired 680 rounds, with cases and dies, \$150.00. Geo. C. Howard, P. O. Box 103, Lanham, Maryland.

Only three fired the Sporter class aggregate. The "average group" was .991 MOA, the winning aggregate .815 and the largest 1.274 MOA.

Finally, the Texas State Varmint and Sporter Championships fired at San Angelo on August 12 and 13. Ten completed the Heavy Varmint class grand aggregate. The "average group" was .8331 MOA (5 fired over and 5 under the average); the winning aggregate was .642 MOA and the largest 1.137 MOA.

Nineteen completed the Light Varmint class aggregate. The "average group" was .8495 MOA; the winning aggregate .622 MOA and the largest 1.226 MOA.

Fourteen completed the Sporter class aggregate. The "average group" was 1.093 MOA; the winning aggregate .666 MOA and the largest 1.668 MOA.

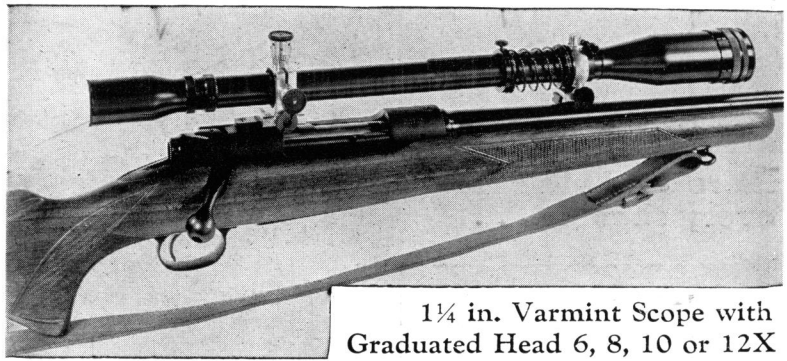
In summary: The "average group" aggregate will not, of course, win but it will place one approximately midway in the aggregate ranking. It is quite possible, even probable, that some one group making up the "average group aggregate" will "place," or come close to it, in the match it is fired in. It is also quite possible (and does happen quite frequently) that one or two bad groups in the aggregate knock the competitor into the "average group" class while the rest of his groups are far better than average.

Quite naturally, it is normally the more experienced tournament shooters with the better gun-ammo combinations that will win bench rest (or any other) aggregates—and, those more experienced shooters will see to it that they do have good gun-ammo combinations for competition.

The beginner in bench rest (or any other) rifle competition will find that the variable weather conditions encountered during a one, two or more day tournament will present more problems than the usual short practice shooting sessions on the home range. It is sound advice to use quiet evening conditions for testing the performance of gun-ammo combinations, but to do as much "practice" shooting as possible under variable mid-day weather conditions. Shooting on different ranges in competition will present new problems

TELESCOPES

For Range & Field Use



1¼ in. Varmint Scope with Graduated Head 6, 8, 10 or 12X

Select the model of your choice from our complete line.

Our new catalog is now available.

JOHN UNERTL OPTICAL CO.

3551-55 East St.

Pittsburgh 14, Pennsylvania

and add to "experience" which (if one is a little bit smarter than this writer) will eventually improve one's performance in competition. If in competition one can "shoot his average" of current performance he has nothing to complain about—the goal should be, however, to keep striving to improve the "average" to the point where it will be in the top bracket—then, when the day comes that one shoots "better than his average" in a match he'll be among the winners.

P. H. T.

7.65 ARGENTINE MAUSER AMMO

Owners of 7.65 Argentine Mausers can take them off the wall now and turn them into active hunting rifles with NORMA'S new 7.65 m/m cartridge.

This fresh-loaded, modern ammunition is loaded in the Norma "Re" cases with Boxer primers, making reloading both possible and practical. Bullets are the Norma "Tri-Clad" hunting type. Both unprimed cases and bullets are available separately. Ballistics include an impressive 2920 ft muzzle velocity and 2841 ft muzzle energy.

The cartridge has been developed to replace the nonreloadable, mercuric primed war surplus ammo, previously the only ammunition available for this surplus rifle.

Further information is available from NORMA-PRECISION, South Lansing, N. Y.

RADIOPHONE RANGE COMMUNICATION

Considering the growing prevalence of vandalism at rifle ranges, and the work and cost of installing the conventional buried wire for telephone connections, we wonder if the presently available and not too expensive transistor circuit two-way radiophones might offer a practical solution to the firing-line - to - target - butts communication problem for new high-power rifle ranges. These compact little instruments have a range of 1½ miles under normal conditions and an FCC license for operation is not required. One manufacturer of these instruments is: ELECTRA INTERNATIONAL COMPANY, 1346 Foothill Blvd., La Canada, California. A letter request will bring complete information. Ask for information on their MINIPHONE 400 models.

The Gunsmith BLACK FINISHING UNIT

Made especially for the man who wants to do the best in firearm refinishing — for himself or for profit. This same process is used by manufacturers. Comes complete with tanks,

burners, supply of PENTRATE crystals, instructions and all equipment needed. Write for details.



HEATBATH CORPORATION

Springfield 1, Massachusetts

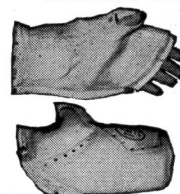
BENCH REST AND VARMINT SHOOTERS

KENRU Soft Swaged Bullets, 45, 50 and 55 gr. Guaranteed less than ½ gr. variation. Gilding Metal Jack-ets: KAMPEN for 50 & 55 gr. bullets @ \$8.50 per M postpaid. SIERRA for 50 & 55 gr. bullets @ \$10.00 per M postpaid. 6m/m jackets .827" & .937" @ \$12.50 per M postpaid. 3/16", .240" and 5/16" lead wire (25 lb. spool's) in good supply.



Please inclose stamp with inquiry. KENRU RELOADING SERVICE Member NRA and NBRSA 166 Normandy Ave. Rochester 19, N. Y.

BRICE SHOOTING MITTS



For discriminating riflemen.

Durable, soft leather, heavy wool padding on back and wrist; protects against pulse. Fingers free. Best mitt for long, hard holding.

Price \$6.00 postpaid. Send glove size with check or money order.

L. J. BRICE

8525 S. E. 32nd Ave., Portland 22, Oregon

CHOOSE SIERRA!

there's a bullet for every shooter . . .

bench rest



.22 CALIBER, .224 Diameter Bench Rest 53 grain Hollow Point. The most accurate and precisely manufactured .22 Caliber Bench Rest Bullet.

target



.30 CALIBER, 180 grain Matchking. A fully jacketed bullet with exceptional accuracy made especially for championship competition shooting.

varmint



.30 CALIBER, .308 Diameter, 110 grain Hollow Point. The lightest successful .30 Caliber bullet made. Phenomenal accuracy and killing power at varmint ranges.

Sierra has a free informative brochure for you about the hobby of handloading. Write today for your copy. — Dept. 586.

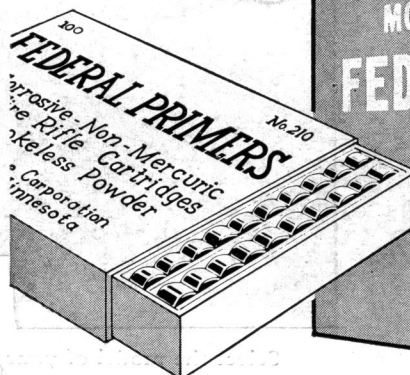
for target or game . . .
the name's the same



SIERRA BULLETS

600 West Whittier Blvd. • Whittier, Calif.

We don't have to make elaborate claims...
FEDERAL PRIMERS have proved their dependability, high quality and performance



MORE THAN 5 BILLION FEDERAL PRIMERS

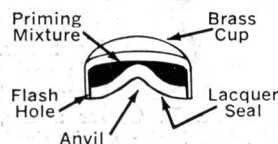
produced for U.S. Govt. and private use proves **FEDERAL'S** manufacturing know-how!

There is no substitute for experience. When you realize that Federal Cartridge Corporation has made and sold over 5,000,000,000 (five BILLION) primers, what better evidence can you ask to prove their quality and dependability. Federal experience means shooting satisfaction.

Federal Primers give you consistently uniform ignition — the prime requisite for accurate shooting. Neither temperature changes nor humidity changes can alter this uniformity. Independent ballistics laboratories have subjected these Primers to a temperature range of +140°F. to -60°F. and found *no variation in performance*.

Federal Primers are non-corrosive, non-mercuric and dependably stable. Put your trust in Federals — as many of the outstanding bench rest shooters do. Check the records.

Made in the U.S.A. where labor receives an ample salary.



IDENTIFICATION

No. 210 Large Rifle Primers — Brass Cup — RED printing on carton

No. 200 Small Rifle Primers — Nickel plated cup — BLUE printing on carton

No. 150 Large Pistol Primers — Copper plated cup — BLACK printing on carton

No. 100 Small Pistol Primers — Brass cup — GREEN printing on carton

retail price

\$8.00 per 1,000

See your Federal Dealer

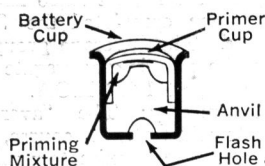
FEDERAL NO. 209 SHOT SHELL PRIMER

This is a "battery cup" primer—charged with Federal's non-mercuric, non-corrosive, extremely stable patented priming mixture—the same priming mixture as used in Federal's Hi-Power and Monark shotgun shells. Packed 100 to a box, 10 boxes to a carton.

FEDERAL Sporting Ammunition

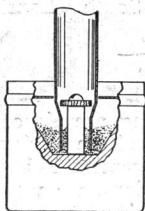
Hi-Power and Monark Shot Shells and .22 Caliber Cartridges

Federal Cartridge Corporation • Minneapolis, Minnesota



retail price

\$14.50 per 1,000



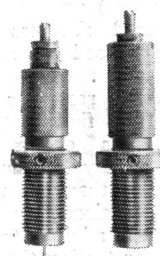
Re-loaders

Your choice of the best dry lubricants is supplied in the "SURE-MARK" CASE LUBRICATOR. Just the right amount—Microfyne graphite, Motor Mica or Molykote—is applied to the case neck without mess or bother. Complete unit with burnishers for all calibers from .22 to .45 with Microfyne or Motor Mica \$1.00; Molykote \$1.25, postpaid.

Wilkins & Schultz, Inc.
Box 334, Barrington, Ill.

Your guns deserve RCBS

RELOADING EQUIPMENT



2 DIE RIFLE SETS

Precision machined. Standard 7/8"-14 thread for all popular reloading presses. Hand polished for long wear. No decorative chrome plating to crack and peel. No inter-changeable inserts which neck size only. Over 500 calibers available.

\$13.50

RCBS INC. Dept. H-9
P.O. Box 729 Oroville, Calif.

